

# What do regional energy system operators look like in a net zero world?

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# Overview

1. The RESO Project – partners and hypothesis
2. Foundations
3. Approach
4. What a RESO might do
5. Governance options and issues
6. Next steps

# The RESO project is a collaboration funded by UKRI



UK Research  
and Innovation



INDUSTRIAL  
STRATEGY



Coventry City Council



UNIVERSITY OF  
BIRMINGHAM

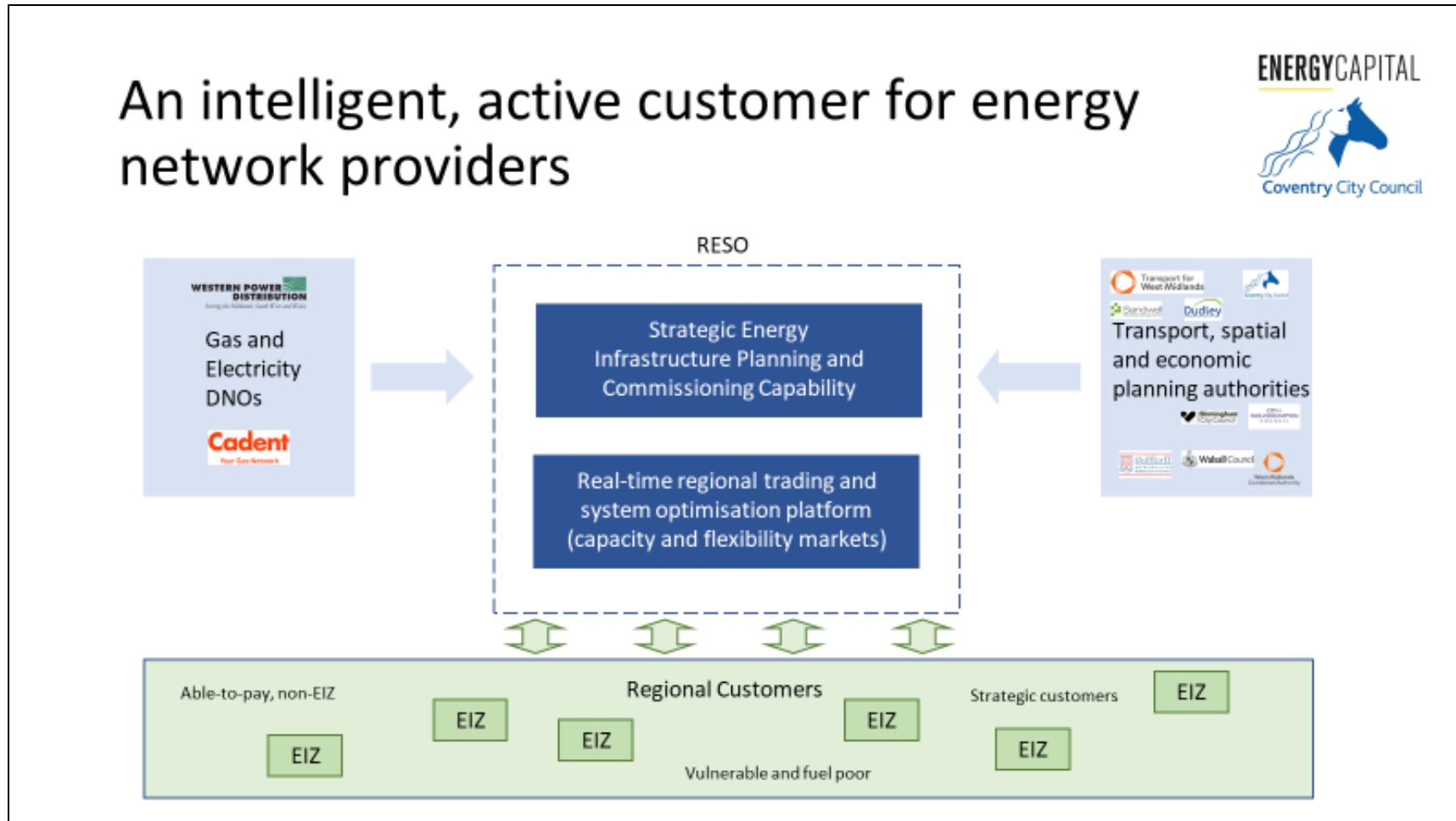


West Midlands  
Combined Authority

ELECTRON



# The basic proposition is that introducing a regional customer with a strategic public accountability will cut the costs of achieving net zero



# There are two core lines of argument underpinning our case

## Economic

Competitive local infrastructure outcomes

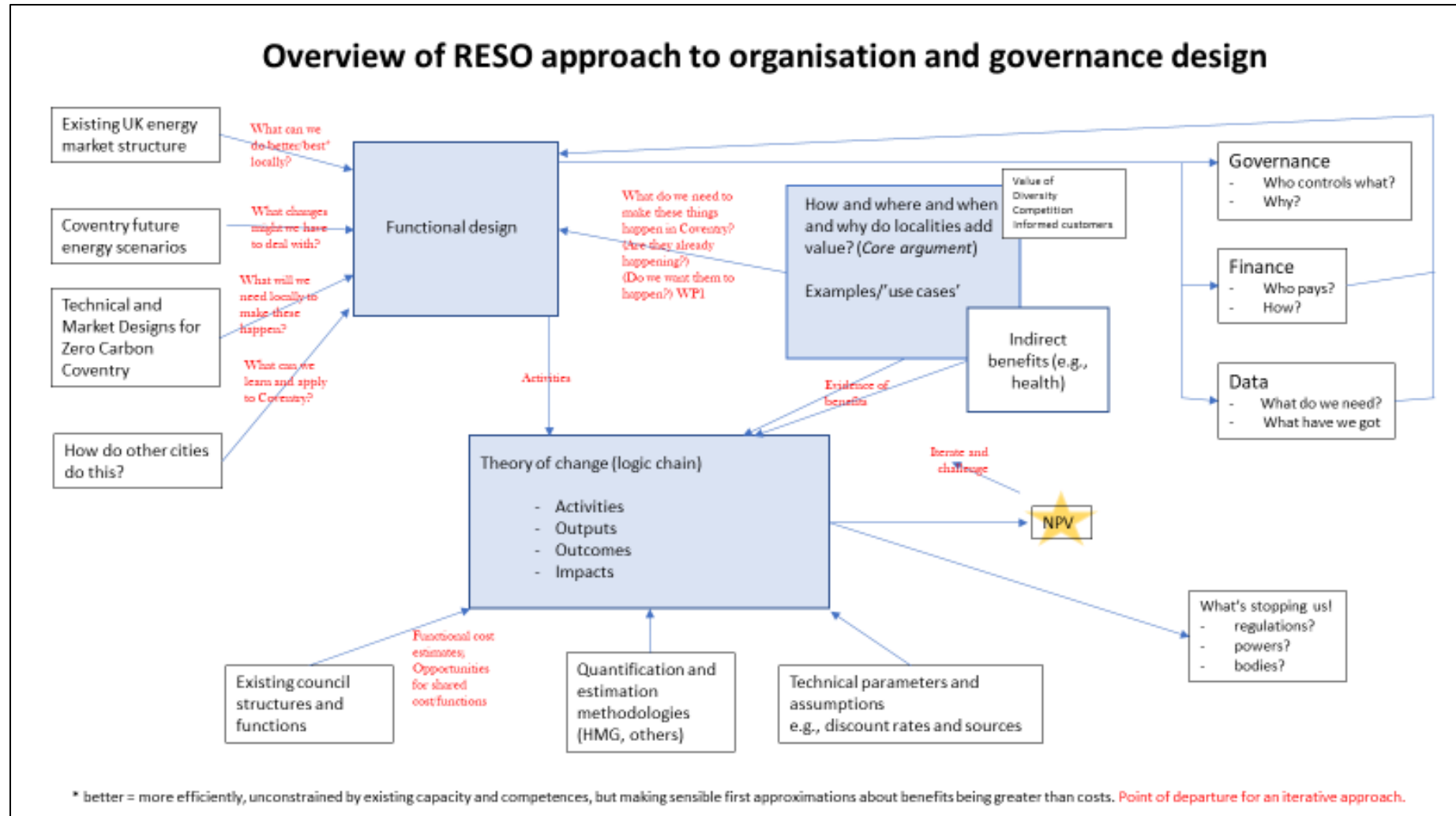
Balancing risk and delivering security of supply *economically* in a decentralised, digitalised world\*

## Systems

Whole system outcomes require whole system management

Efficient matching of capacity to control with access to necessary data

# We've sought to follow a structured approach with a real – and reasonably representative - use case

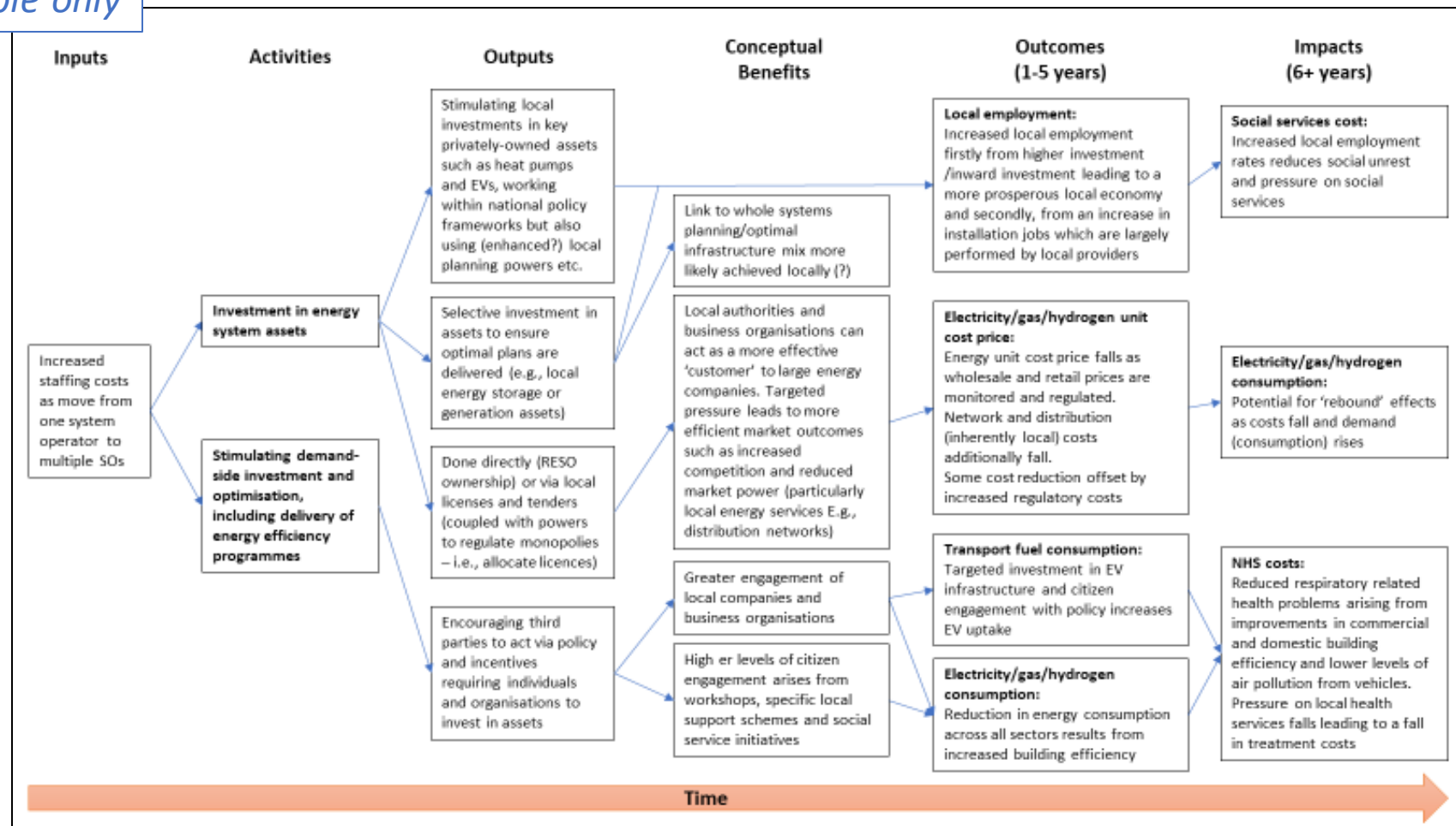


# The emerging functional form of RESO looks sensible and is consistent with FSO arguments

- **Energy systems planning, integrated into whole place system planning**
- **Investment in energy system assets**
- **Local energy system balancing in real time (optimisation)**
- **Security of supply**
- **Stimulating demand-side investment and optimisation, including delivery of energy efficiency programmes**
- **Market access and data**
- **Consumer protection**
- **Protection of vulnerable citizens**
- **Allocation of costs and benefits**

# For each functional area we are working methodically through a logic chain

*Example only*





# RESO governance is critical to delivering benefits. There are good international models.

	Model	Key features	Examples
1	<b>City department</b>	Utility run as part of council structures	Los Angeles
2	<b>Directly controlled utility</b>	Municipal utility reports direct to local authority	Barcelona
3	<b>Independent agency</b>	Strong independent boards appointed by Mayor or Council – effectively arms length public bodies	Knoxville
4	<b>Joint powers agency</b>	Public bodies work together to manage energy networks in their areas, each appointing board members and with agreed mandates	South California
5	<b>Municipal corporation</b>	Municipal utility run as commercial entity (but with profits used for public benefit) in competition with private sector	Toronto
6	<b>Public benefit corporation</b>	Public monopoly run to meet a public purpose rather than to maximise profits (i.e., with a legal charter). Financially independent of city.	New York
7	<b>Public utility district</b>	Directly elected boards but completely separate from the council	Sacramento
8	<b>Cooperative</b>	All citizens are members and elect a board	Switzerland; Germany; USA

# We're completing an impact assessment this year, and welcome views and feedback.

- Publicly-licensed RESO accountable to regional politicians but independent of direct local authority control
  - This is a difficult balance, but better than a national/local disconnect
- Taking on elements of DSO/FSO role, meeting FSO competence and excellence criteria
  - Good fit with a national FSO model entirely possible
- Political accountability and net zero economic geographies should define boundaries
  - Beyond obsolete historical boundaries and arbitrary Whitehall constructions
- Permanently funded through energy system
  - Allowing for local flexibility and support for policy priorities
  - Subject to national supervision/approvals and financial envelopes