

Centralisation, state intervention and the redistribution of power in energy markets

**Oxford Energy Network
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Low emission
electricity



Marine carbon
removal



Urban carbon
removal

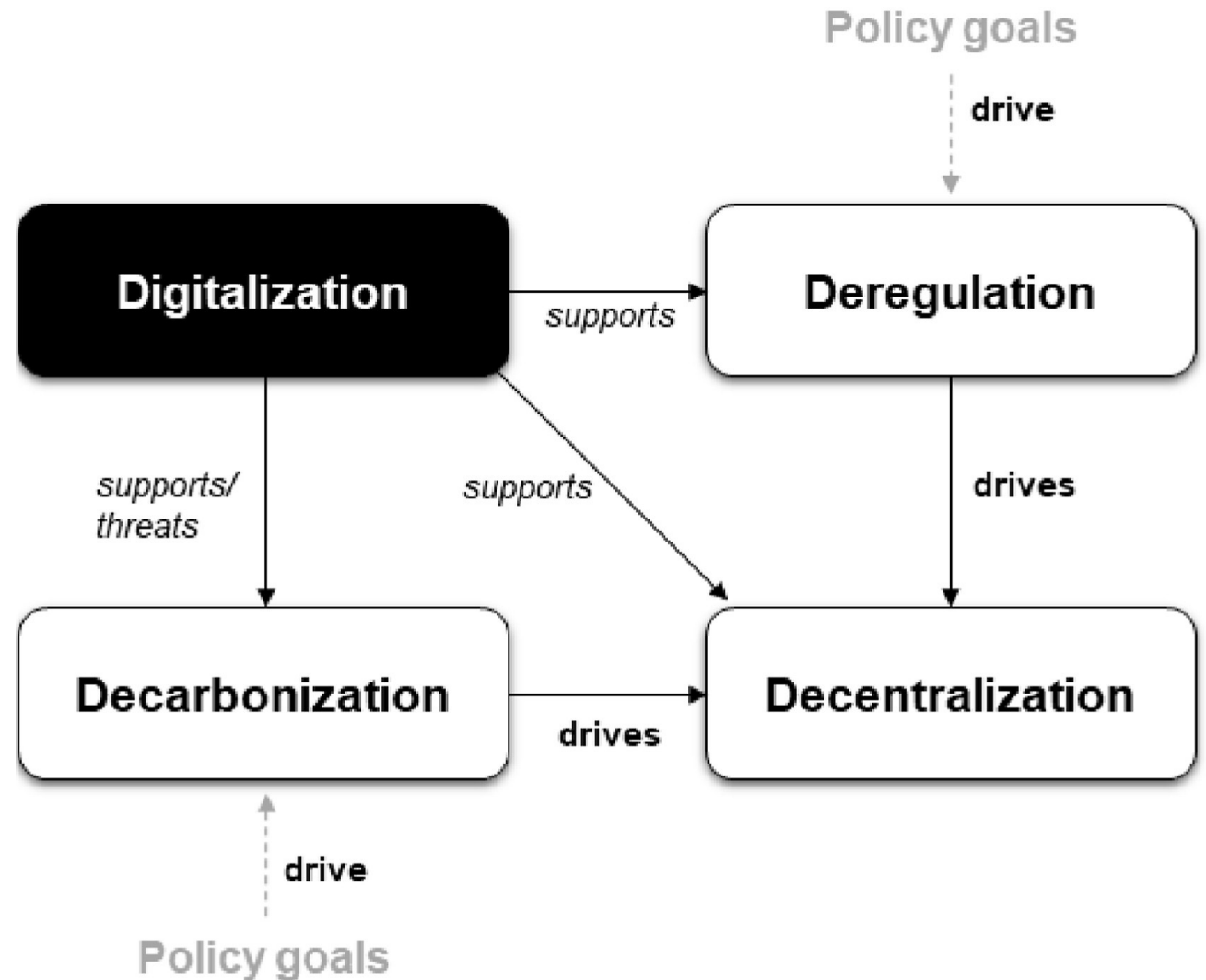
Against the narrative of decentralisation

Energy

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Digitalization in decarbonizing electricity systems –
Phenomena, regional aspects,
stakeholders, use cases,
challenges and policy options

Fabian Heymann^a ✉, Tatjana Milojevic^b 👤 ✉,
Andrei Covatariu^d ✉, Piyush Verma^c ✉



The Method

Historical, policy and institutional analysis

Interviews to document networks of influence

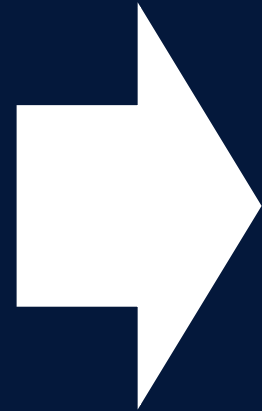
Tracing decisions making and regulatory choices

The Argument

Low carbon technology financial needs

High uncertainty over technology coupling

New expectation of public accountability

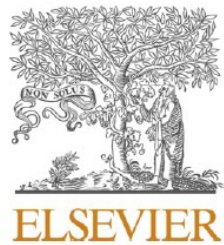


The Argument



New forms of political centralisation

First. UK history



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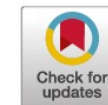
Original research article

In plain sight: The rise of state coordination and fall of liberalised markets in the United Kingdom power sector

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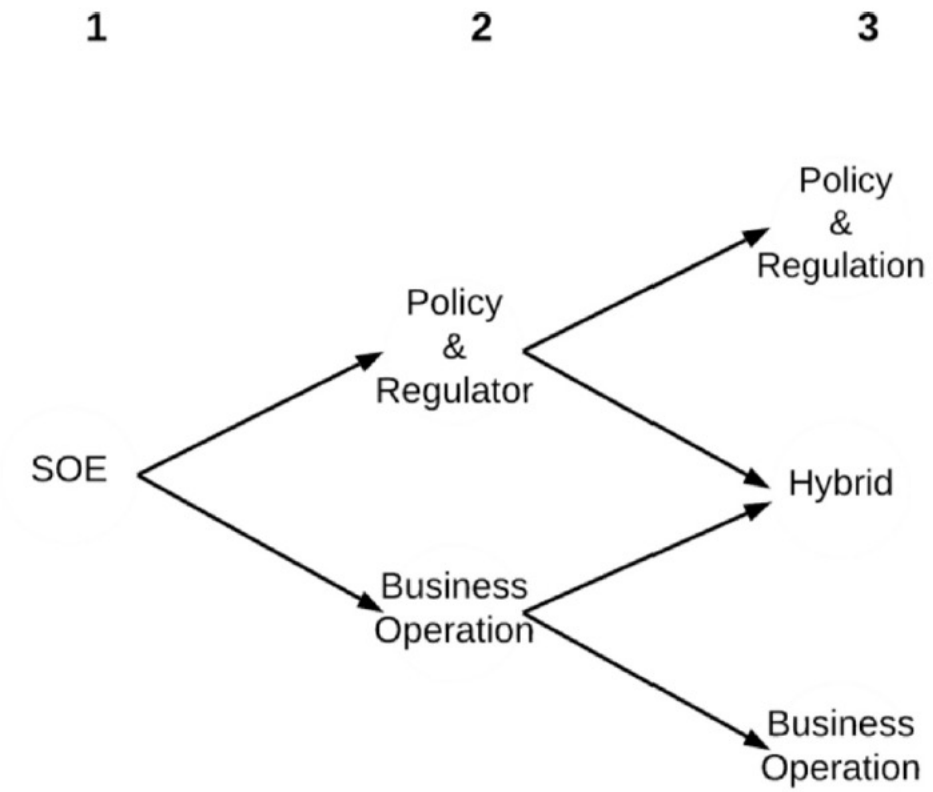


Fig. 1. Institutional evolution in the electricity industry.

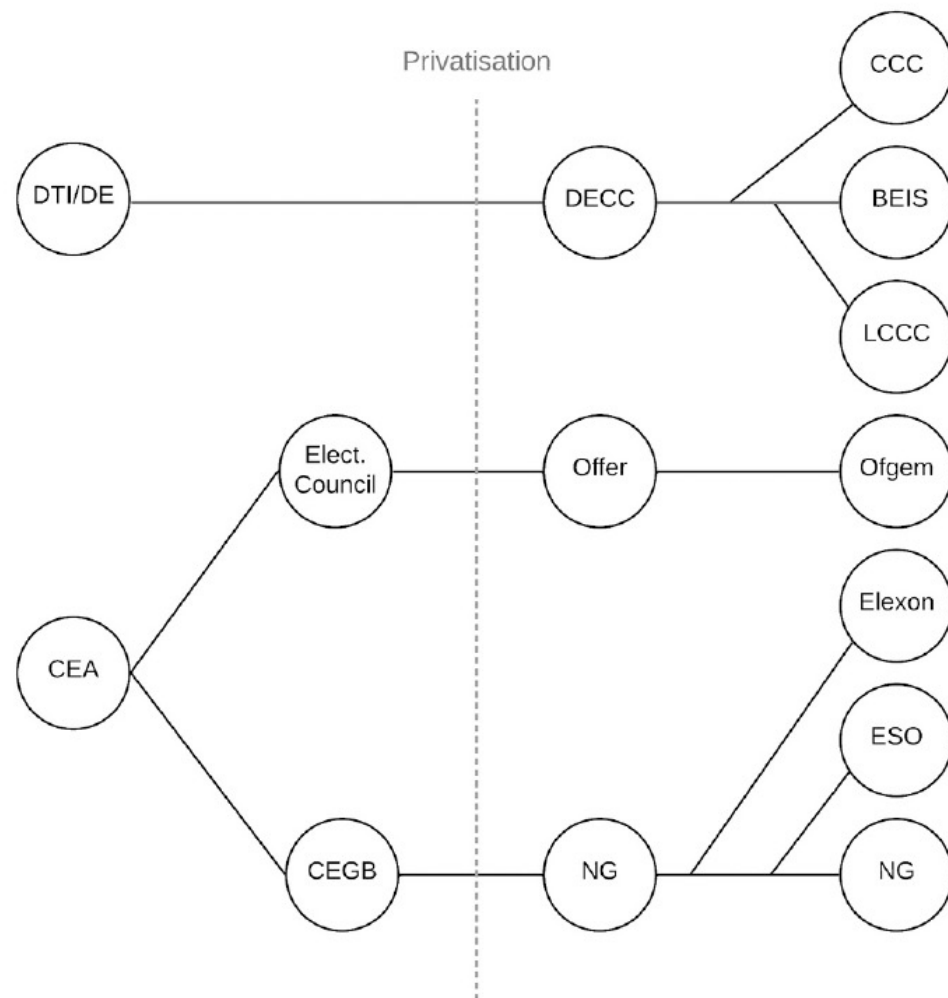


Fig. 3. Analytical description of the institutional evolution in the UK.

CEA: Central Electricity Authority; CEGB: Central Electricity Generating Board; DTI: Department of Trade and Industry; DE: Department of Energy; DECC: Department of Energy and Climate Change; CCC: Climate Change Committee; BEIS: Department of Business, Energy and Industrial Strategy; Low Carbon Contract Company; Offer: Office of Electricity Regulation; Ofgem: Office of Gas and Electricity Markets; NG: National Grid; ESO: Electricity System Operator; FSO: Future System Operator; NG: National Grid.

Low Carbon Contract Company

Elexon

Energy System Operator / Future Systems Operator

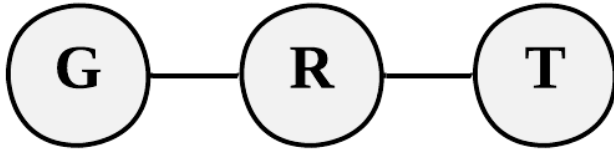
Dimension	Re-regulation	State coordination
Role of the state	Assertive regulators steer private operators	State agencies take operational decisions
Governance tools	Differentiate regulation across market segments	Public mission agencies are in charge
Political objective	Efficient capital allocation and acceptable retail prices	Lowering capital cost and de-risking investment
UK Instruments	<ul style="list-style-type: none"> • Price Control • Regulated asset-based remuneration • Segmentation of markets (ie. REMA) 	<ul style="list-style-type: none"> • CfD area planning • Future Energy Scenarios • Offshore Coordination mechanisms
UK actors	BEIS; Ofgem	BEIS; SO, LCCC, Crown Estates

The importance of the SO

		Ownership		
		Pubic		Private
Location of system operator	Integrated	<div>1</div> <div>Mexico</div> <div>Pre-reform</div>	<div>1</div> <div>Chile</div> <div>Pre-reform</div>	<div>1</div> <div>UK</div> <div>Pre-reform</div>
	Transmission			<div>2</div> <div>Chile</div> <div>Liberalization</div> <div>2</div> <div>UK</div> <div>Liberalization</div>
	Independent	<div>2</div> <div>Mexico</div> <div>Reform</div>	<div>3</div> <div>Chile Reforms</div> <div>(2016)</div>	<div>4</div> <div>Future Systems</div> <div>Operator</div> <div>3</div> <div>UK License</div> <div>change (2017)</div>

Why is this important?

Classical depiction of regulatory relations



Legend

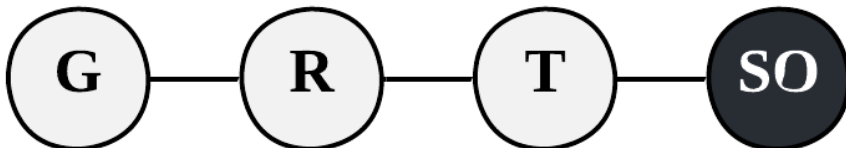
G: Governor

R: Market regulator

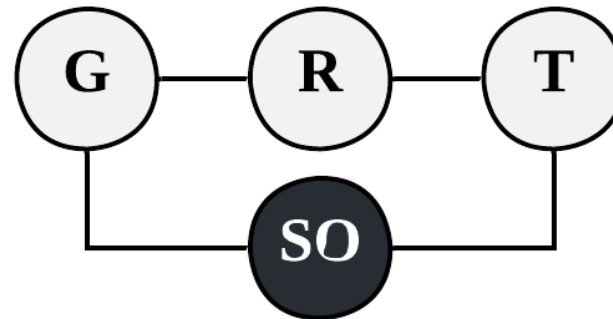
T: Target industries

SO: System operator

SO integrated to transmission company



SO independent from the transmission company



New interventionism: the re-politicisation of electricity governance with renewable energy policies in the UK, Mexico and Morocco

Recto running head : JOURNAL OF EUROPEAN PUBLIC POLICY

Verso running head : E. MATHIEU AND J. M. VALENZUELA

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Forthcoming in the Journal of European Public Policy

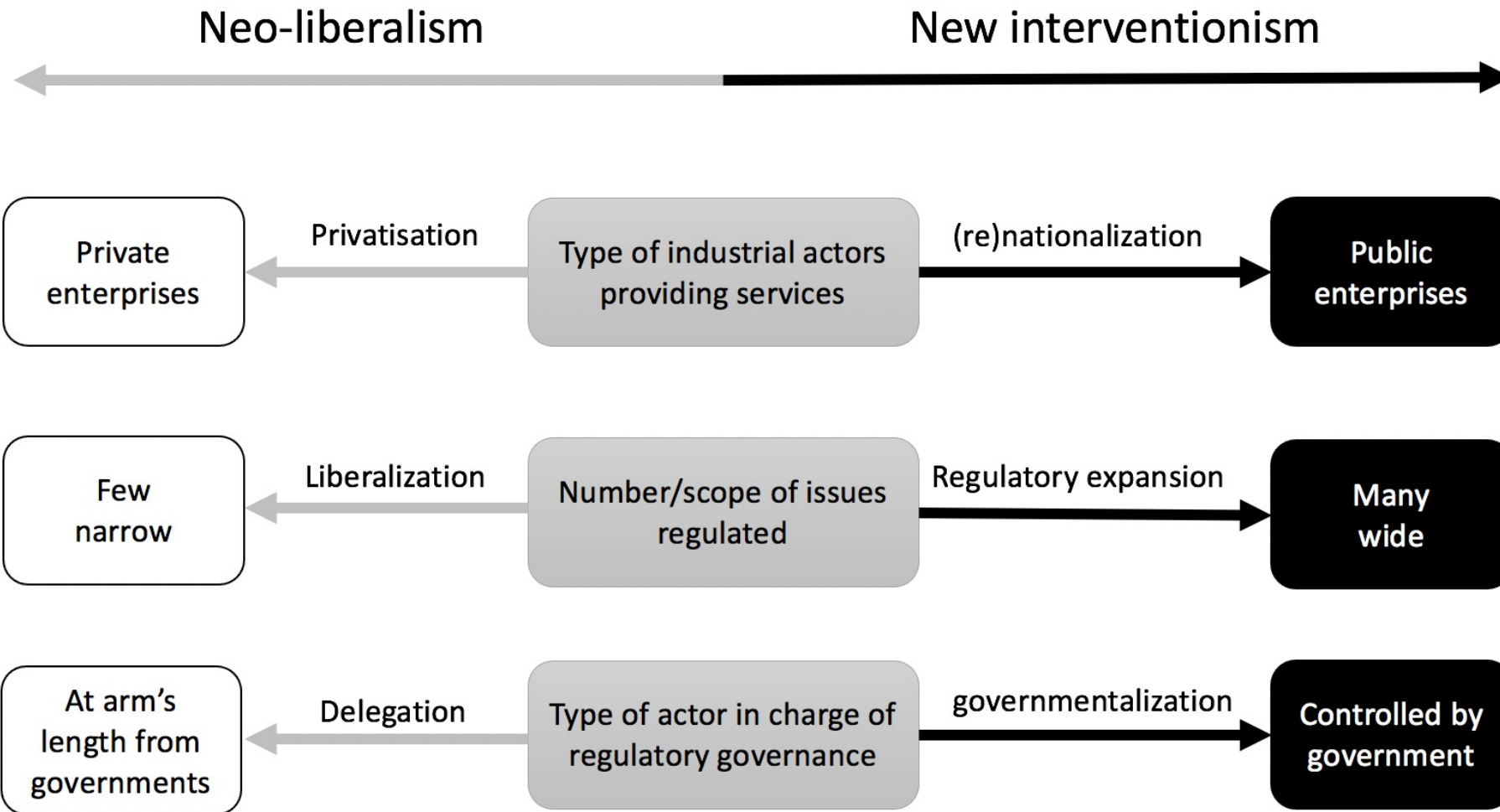


Table 2. Evolution of interventionism in electricity policy by policy instruments (UK)

Intervention instrument	Policy instrument			
	Wholesale market (1989-)	RE Quotas (2000-2010)	RE FiT (2000-)	RE Auctions (CfD) (2013-)
Type of industrial actors	Private	Private	Private	Private
				SOEs
Number of regulated issues	0	2 Volume Technology	2 Technology Price	5 Volume Technology Location Off-taker Local integration
Regulatory governance	IRA	IRA	IRA	Ministry

Note: darker cells correspond to more interventionism

Table 3. Evolution of interventionism in electricity policy by policy instruments (Mexico)

Intervention instrument	Policy instrument				
	Single buyer (1992-2014)	RE Wheeling subsidy (2008-2015)	Market (2014-)	RE Certificate Obligations (2015-)	RE Auctions (2015-)
Type of industrial actor	SOE	Private	SOE	Private	SOEs
	Private		Private	SOE	Private
Number of regulated issues	4 Volume, Technology Location Off-taker	1 Price	1 Off-taker	1 Volume	3 Volume Location Off-taker
Regulatory governance	Ministry	IRA	IRA	Ministry	Ministry
	IRA				

Note: darker cells correspond to more interventionism

Marginalisation of Regulators

Auctions governance in the UK



2013 UK Energy Act

Auctions to allocate contracts
for difference (CfD)

Focus on nuclear

Re-distributive policy

Ministry (DECC) high profile

Ofgem (IRA) criticized within Parliament

2023 Grid & RE coordination

Need to coordinate grid
and RE expansion


Ofgem called to be the 'system architect'

Ofgem rejects!

Ofgem searching to bolster its legitimacy

Conflicts with its consumer-oriented mandate

Delegation to system operator, change Ofgem
mandate



Mexico

Jan. 8, 2021, 3:45 PM GMT

Mexico Could Scrap Antitrust and Energy Regulators, AMLO Says



Justin Villamil
Bloomberg News



Turbulent times for energy governance.

Opportunities for creative re-imagination of
energy institutions.

Thank you.

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