## Shifting political power in an era of electricity decentralization

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## Entangled energy and political systems

- Democratic institutions and governance systems have evolved in step with our energy system (Goldthau 2014, Mitchell 2011)
- We tend to think of democratic institutions as stable but they are ongoing projects that change under our actions and decisions
- As the energy transition creates turbulence in energy systems, it is natural that we are also seeing turbulence in political systems (although there are multiple other reasons for turbulence as well)



"Next!" Puck magazine, 1904. A Standard Oil tank wraps its tentacles around the Capitol, State House, and major industries, while reaching for the White House.

> https://energyhistory.yale.edu/library-item/politicalcartoons-and-standard-oil-gallery

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### "There is a crack in everything, that's how the light gets in"

Leonard Cohen, Anthem





### Overview

- 1. Political decision-making dynamics in democratic countries
- 2. The role of fossil fuels in modern democracies
- 3. The energy transition and centralised vs. decentralised electricity pathways
- 4. Decentralisation and its political implications
- 5. Hints of hope emerging examples of a new energy politics



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# 1. Political decision-making in democratic countries

The Policy Cycle



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BUSINESS SCHOOL Slide from Sir Peter Gluckman: https://www.ingsa.org/wpcontent/uploads/2016/05/Gluckman-UNEAkeynote.pdf

### How policy making actually works



Slide from Sir Peter Gluckman: https://www.ingsa.org/wpcontent/uploads/2016/05/Gluckman-UNEAkeynote.pdf

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# Understanding the connection between energy industries and politics



### Those best able to influence...

- Have money
- Have resources (e.g. lawyers, technical experts)
- Control vital resources (e.g. energy)
- Control jobs
- Control information
- Have elite level connections (e.g. regulated industries)
- Have social legitimacy
- Are able to influence public opinion



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For a long time, these are all things that oil and gas industries have had

BUSINESS SCHOOL (Importantly, other people can have these things too)

# 2. The role of fossil fuel industries in political systems

Oil and gas industries have tremendous political power

They generally use that political power to ensure themselves safe and profitable operating conditions

Corporations have a legal obligation to pursue profits

That tends to mean opposing or watering down progressive energy, climate, environmental, and, occasionally, social policy

Because they've held such an important role in our economies, they have often been successful in realising their political goals

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Oil Firms Spend Millions On Climate Lobbying





## Biomethane in the Netherlands

Smink et al (2015) discussed how gas producers in the Netherlands used their political positioning to protect their interests against biomethane producer to:

- Change regulatory rules to make it hard for these producers to participate in markets
- Provide arguments and information to both policy makers and the public that supported incumbency

Business Strategy and the Environment Bus. Strat. Env. 24, 86–101 (2015) Published online 1 July 2013 in Wiley Online Library (wileyonlinelibrary.com) DOI: 10.1002/bse.1808

### Keeping sustainable innovation on a leash? Exploring incumbents' institutional strategies

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### Renewable Energy in Canada

Rosenbloom et al 2016, Stokes 2013, and Brisbois 2019 all discuss how incumbent energy interests, and their associated unions, successfully lobbied both the government and the public to end feed-in tariff subsidies and support for renewables



BUSINESS SCHOOL Research Policy Volume 45, Issue 6, July 2016, Pages 1275-1290 BUSEARCH

Framing the sun: A discursive approach to understanding multi-dimensional interactions within socio-technical transitions through the case of solar electricity in Ontario, Canada

Daniel Rosenbloom 온 쯔, Harris Berton 쯔, James Meadowcroft 쯔



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FEBRUARY 11, 2016 2:02PM ET

As the influential oil family Koch Brothers in the US realised that solar would impact their profitability, they proactively lobbied state governments and were successful in pre-emptively blocking legislation that would have supported the development of solar energy.

### The Koch Brothers' Dirty War on Solar Power

All over the country, the Kochs and utilities have been blocking solar initiatives — but nowhere more so than in Florida

By TIM DICKINSON



Illustration by Victor Juhasz for Rolling Stone

### Energy industry letter suggested environmental law changes



#### Greenpeace says oil and gas companies got what they wanted from Ottawa

Max Paris Environment Unit · CBC News · Posted: Jan 09, 2013 4:34 PM ET | Last Updated: January 10, 2013



Environment Minister Peter Kent was one of the ministers to whom a letter from the energy industry was addressed that suggested changes to environmental laws. (Chris Young/Canadian Press)

A letter obtained by Greenpeace through access to information laws and passed on to the CBC reveals the oil and gas industry was granted its request that the federal government change a series of environmental laws to advance "both economic growth and environmental performance."

Within 10 months of the request, the industry had almost everything it wanted.

In 2013, the Canadian Association of Petroleum Producers successfully lobbied for changes to weaken numerous environmental acts including the Fisheries Act, the Canadian Environmental Assessment Act, and the **Navigable Waters Protection Act** 

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# Guardian

Oil groups fund police departments in several USA jurisdictions where there are environmental justice concerns.

## Revealed: oil giants help fund powerful police groups in top US cities

Investigation portrays fossil fuel industry as common enemy in struggle for racial and environmental justice in America



About this content

Nina Lakhani in New York

Mon 27 Jul 2020 16.00 BST

▲ A Salt Lake City police officer at a protest earlier in July. Police foundations - which provide funds to local police departments - in cities such as Salt Lake are partially funded by corporate names. Photograph: Rick Bowmer/AP



## Summing up the role of oil and gas...

- 1. Oil and gas have a lot of influence on our governments and institutions
- 2. A lot of this influence makes sense since they control vital resources (including jobs and economic growth)
- 3. A lot of this influence has also been used to limit environmental and social protections
- 4. That influence has also been used to slow down an energy transition that will diminish their "super profitability" (Kenner and Heede 2021)



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### 3. The energy transition

### World Energy Outlook 2020

Renewables grow rapidly in all our scenarios, with solar at the centre of this new constellation of electricity generation technologies. Supportive policies and maturing technologies are enabling very cheap access to capital in leading markets. With sharp cost reductions over the past decade, solar PV is consistently cheaper than new coal- or gasfired power plants in most countries, and solar projects now offer some of the lowest cost electricity ever seen. In the STEPS, renewables meet 80% of the growth in global electricity demand to 2030. Hydropower remains the

largest renewable source of electricity, but solar is the main driver of sets new records for deployment each year after 2022, followed by c offshore wind. The advance of renewable sources of generation, and





### South Korea follows Japan and China in carbon neutral pledge





Smog shrouds Seoul at dusk. Local and Chinese factories have been blamed for pollution in South Korea © AFP/Getty Images

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Edward White in Wellington and Song Jung-a in Seoul OCTOBER 28 2020 FINANCIAL TIMES

### Electricity transitions

Electricity is an important part of the energy sector but buildings, transport and industry also make up a lot of global energy demand

Shifts to electrification in these sectors could mean, globally, that electricity will move from 20% to 45% of total final energy use, and up to 60% in some regions (IRENA, 2018)



Figure 1 Contribution of renewable electrification to global decarbonisation needs

Notes:  $CO_2$  = carbon dioxide;  $MtCO_2$  = million tonnes of carbon dioxide. Source: IRENA's own analysis based on IRENA (2018a)

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### Centralised vs decentralised electricity transition pathways

Electricity systems in (most) advanced economies have been largely centralised: major generation plants or installations (gas, coal, hydro, nuclear) flowing outward to consumers.

Generation from renewables is more geographically diffuse. This means that wind, solar, biomass, geothermal, etc. are spread out.

The energy density of renewables is much lower than for carbon resources so more space is needed.



# Decentralisation makes economic sense



BUSINESS SCHOOL Source: Clack et al (2020)

### Conflict over electricity pathways

<u>Centralised</u> system pathways favour large scale renewables, traditional business models, and a concentration of actors

<u>Decentralised</u> system pathways favour many actors involved in small scale renewables, including through prosumption and microgrids, using a mix of different business models

Although any future system will likely be a mix of centralised and decentralised resources, these visions "...constitute **major conflict lines for business models, energy finance or grid operation**." (Lindberg et al 2019)



https://www.brooklyn.energy

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# 4. Decentralisation and its political implications

When resource ownership is centralised, the political power derived from controlling these resources is also centralised

This makes it easier for those with control to realise their political goals

As discussed, those political goals tend towards profit maximisation and maintenance of incumbency, often at the the expense of environmental or social goals

Decentralisation that is affordable and accessible makes it much easier to spread market shares and political power around



Alejandro Nuñez @anunezjimenez · 12m

A major consequence of net-zero strategies too often overlooked

Spain's net-zero strategy aims to lower its <u>#energy</u> dependence on imports from ~75% to 13%, saving €344 billion by 2050

This redirects the massive transfer of wealth from oil producers to local renewable producers



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## Local vs Community Energy

Decentralised generation and storage does not necessarily mean that market shares and ownership will be distributed:

- With the right (wrong?) policy supports, centralised interests could own assets that are decentrally located (e.g. renting space on householder roofs)
- Helps decarbonise but doesn't change the control over markets that enables the exercise of political power (Devine-Wright 2019)



#### comment

Community versus local energy in a context of climate emergency

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# Why else is centralised ownership a problem?

Income inequality is, along with climate change, destroying our prospects for a liveable future

We need energy transitions to go fast and people are more likely to view renewable energy positively if they are able to realise economic benefits (Bauwens and Devine-Wright 2018) NEW YORK TIMES BESTSELLER

JOSEPH E. STIGLITZ

"A searing read." -Nicholas Kristof



HOW TODAY'S DIVIDED SOCIETY ENDANGERS OUR FUTURE

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### Decentralised ownership and energy democracy

Decentralisation of ownership is a key part of energy democracy.

Energy democracy is an "ideal political goal, in which the citizens are the recipients, stakeholders (as consumers/producers) and accountholders of the entire energy sector policy." (Szulecki, 2018:35)

Energy democracy is characterised by principles of broad participation, local economic development, community development, political engagement, and a focus on justice, equity, and environmental responsibility (Burke and Stephens 2018)



https://susdev.eu/renewable-energy-an-opportunity-for-energy-democracy

## Who does energy democracy?

The "new energy actors" prominent in energy democracy visions include:

- prosumers (people who both produce and consume electricity)
- co-operatives
- cities and municipalities
- Other non-profit maximising business model participants

There is a bias in participation toward welloff, well educated, male participants (Łapniewska 2019)

This is not an inevitability but rather something that needs to be addressed through targeted policy mechanisms.



http://www.foeeurope.org/a23b15c1bff5930ca155e43d8cdd67d3



## Energy democracy and political power

Motivations for energy participation are important because this will (theoretically) drive their political goals

New energy actors are interested in stable, secure markets, but they also have the freedom to pursue social and environmental goals with equal or greater enthusiasm than profits

Even a partial redistribution of electricity system ownership could therefore have large political impact if those interests are:

- Organised (i.e. through lobby groups)
- Aligned (i.e. in advocacy coalitions)
- Requesting energy, climate or social outcomes that are substantially different from the status quo

### Appendix B – List of beneficiaries of the Waterfall Fund

ecipient	Amount	Purpose
ervaig Community Hall	£2,000	Hall refurbishments
ona Football Club	£1,000	New football goals
eadland Explorations	£500	Climbing equipment
obermory Book Festival	£500	Start-up costs
eahawks Cheerleading Academy	£500	Start-up costs
obermory Fire Cadets	£1,500	New uniforms
1ull & Iona U3A	£500	Advertising, printing, accommodation and trainin
ir Ghleus	£1,500	Mod tuition
oss of Mull Historical Centre	£1,200	New website construction
Aull First Aid	£1,400	Pain relief equipment
Aull Mod	£500	Creating a Mull song book
ona Primary School Parent Council	£1,910	Summer camp for lona primary pupils
Aull Highland Games	£1,500	New shed
omar	£500	Visual arts programme
Aull Aquarium	£2,000	New pump

#### https://doi.org/10.17868/69788

At the very least, new energy actors are unlikely to mobilise to block climate legislation



# 5. Hints of hope – emerging examples of a new energy politics

The EU Renewable Energy **Directive II** and "Renewable Energy Communities" The RED II, to be transposed into law by June 2021, requires countries to implement an enabling framework for locally owned energy projects that are:

- Owned by people, SMEs and local authorities
- Not profit-maximising
- Open and inclusive
- Locally owned, with individual shares capped at 33%

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### THE EU'S CITIZEN-OWNED ELECTRICITY IN 2050 SMES SMES 1% PUBLIC BUILDINGS CO-OPS

https://energy-cities.eu/wpcontent/uploads/2019/02/community\_ene rgy\_booklet\_2018\_en.pdf

### Cities are emerging as energy actors

Cities have capacity and resources to realise projects

Cities are also strong political actors

They are often on the frontlines on issues such as energy poverty, local economic development, and climate action



### Vision and mission

Energy Cities is a network of 1,000 local governments in 30 countries. We believe that the energy transition is about more than renewable energy or great technologies: It is about a wise use of resources while strengthening local participation and well-being in a democratic Europe.

### Our vision

Energy Cities wants a radical transformation of the energy systems and policies, giving citizens the power to shape a decentralised and renewable energy future. We trigger a trustful dialogue between citizens, local leaders and EU & national institutions to accelerate the energy transition in Europe.

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# The inevitability of decentralisation: subversion in the face of political opposition

Even in places where governments are unsupportive, people are finding ways to engage in community energy

### 2019: a year of change



### ABOUT BANFF ENVIRONMENT

#### ENT EVENTS

RECREATION TO



### Solar Power

- Solar Production Incentive
- Solar Panels in Banff

### Solar Photovoltaic (PV) Production

#### Incentive

The Town of Banff encourages property owners to install solar photovoltaic systems that produce renewable electricity. The incentive program is funded from the environmental reserve,



which is generated through a franchise fee that the electrical utility pays to use the space under the streets to run its wires for providing electricity.

### To conclude...

Ownership of electricity generation is already diversifying

The degree of political disruption will depend on:

- How much market shares shift
- How politically organised new actors are
- The degree to which existing governments are open to change
- How much new actors can agree on their political goals

At the very least, reducing the power of oil and gas producers to lobby for weakened climate targets will be a very good thing



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Presentation is based on research done for the Powershifts Projects (<u>www.power-shifts.com</u>)

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