

15th IAEE European Conference Vienna 2017, 3-6 September

THE POLITICAL ECONOMY OF ENERGY TRANSITION IN THE EU

Aviel Verbruggen emeritus University of Antwerp www.avielverbruggen.be (in overhaul)



Overview

- Political Economy
- Energy transition for climate
 - Necessary & sufficient mitigation process
 - Transitions: Deficient
 Thorough
- EU energy-climate policy today
 - Three policy goals
 - 2014 restoration
- Control the "Energy Policy" discourse
- Conclusions + final teaser



Definition: "Study of rational decisions in a context of political and economic institutions"

- •<u>Institutions</u> appear as internalized conventions & norms $[\times]$ values] and externally sanctioned formal rules $[\times]$ law]
- •Paramount is the interaction of individuals, institutions, and markets as human made & governed constructions
- •Ideas help frame interests and incentives to bring about transformative change
- Discourses bundle ideas to action

Political economy is like studying icebergs

Part is visible – most happens below the surface ... networking, lobbyism, advocacy, discourses ... Usual standards of scientific analysis not applicable

Political economy = the science of economics 1776-1876 Renewed attention from sectors where neo-classical economics fails: development aid, financial crisis, ...

?What about global climate policy?

Civilization % Energy uses

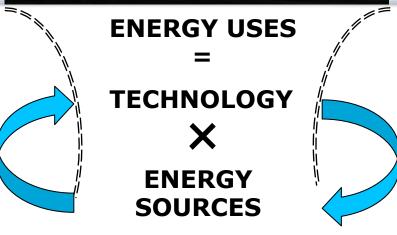




Civilization

Lock-in

- paradigms
- discourses
- social constructs
- financial interests

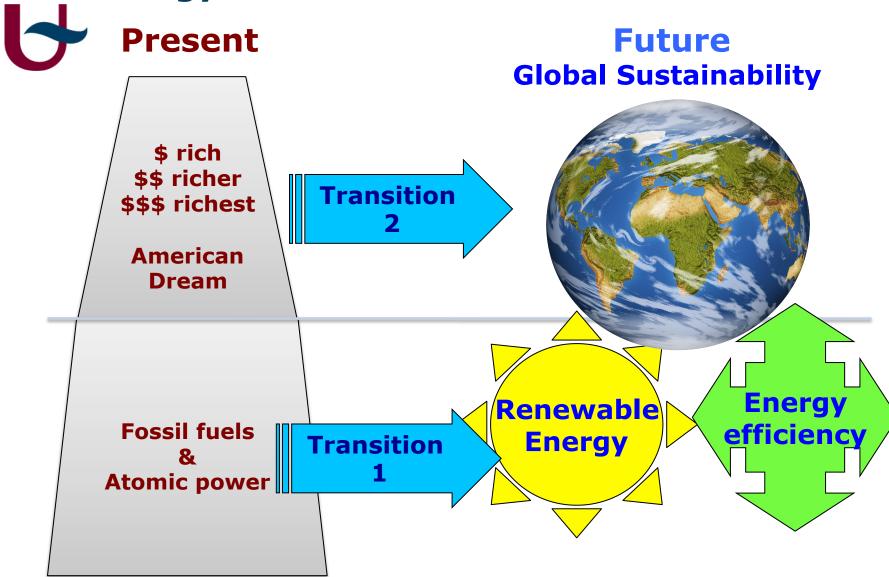


Substrate

Lock-in

- infrastructures
- habits (!mobility)
- vested interests

Energy % Civilization: Present - Future





Energy system transitions

As old as human race, occurred spontaneous, voluntary:

- Because of progress
 Domesticate dogs, donkeys; control fire (cook, bake, dye ...)
- Related to tools, technique, technology
 Wheels, sails, levers, ... electronics, new materials, ICT, ...
- Revolutionizing societies
 Industrial revolution: convert fuels → heat → work (steam, engines)
 Now: tap electricity from ambient sources (light, air, water currents)

Today a necessity:

- Depletion fossil fuels: non-issue, most fuels must stay underground
- Environmental pollution (particulates, ozon, dioxines)
- Atomic power: risks, waste, security, habitat loss by accidents
- Irreversible destruction of unique life-support systems: atmosphere, climate

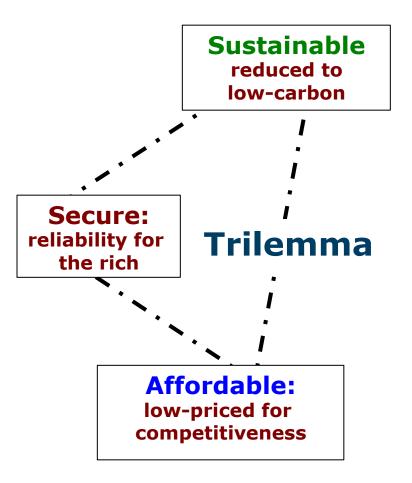
Boosted by *pursued* Sustainable Development Barried by *lock-in:* infrastructures, vested interests

Two energy transition paths Deficient ⇔ Thorough

Deficient	Thorough
Low-carbon tripod mantra: RenewablesNuclear powerCarbon Capture & Storage CCS	 ONLY renewable energy (RE) Direct harvesting of electricity Not compatible with nuclear Ban large-scale fossil fuel use
Sustainable development:Obligated window dressingNo sustainability assessment	Sustainable development: Prevailing paradigmStrict sustainability assessments
 Centralized power systems reign Reconstructed by vested interests Not affordable for poor nations and poor people 	 Priority: RE harvesting by prosumers Mediocre RE sources harvestable Redundant powergen capacities Regulatory solutions needed Independent public regulators Rich countries lead (⇔ offsets) Developing countries emulate



EU energy policy goals Flawed Trilemma ⇔ Cascade Logic



Cascade

1. Sustainable: ambient renewable energy flows = nature decides where & when sources deliver; humans adapt

2. Secure ≠ all energy wishes instantly satisfied [security ≠ reliability ≠ obesity]

3. Affordable: by technological innovation capacities become incredibly cheap & redundancy + grid congestion major issues



Lock-in (2014-....) Large energy companies # EU Commission # Nuclear discourse

- Magritte Group (March 19, 2014) recommends:
 - Preference for 'mature renewables in the regular market'
 - Priority to the utilization of existing competitive power capacity rather than subsidizing new constructions
 - Restore ETS as flagship of climate and energy policy
- EU (April 9, 2014) New Energy State Aid Guidelines
 - Refrain the German Energiewende
 - Payments for coal powerplant capacity
 - Guarantee £92.5/MWh during 35 years for Hinkley Point
- Nuclear discourse molds fake reality
 - IAEA & IPCC accept nuclear as option (⇔ renewables)
 - Nuclear not submitted to sustainability assessment



In the EU, vested energy interests

- are centralized power houses
- principal in the Brussels and national lobbyism webs
- active in universities and on scientific fora

Control EU and Member State regulation

Stakeholders participate (victoriously) in comitology EU officials are limited in capability, capacity, action radius Member States maintain significant energy authority

Control the hearts and minds

Dominant discourse by supreme advocacy
Changed editors of *Energy Policy* reject disclosing analysis
IPCC accepts nuclear power as valid mitigation option, by
skipping the assessment of critical publications



Concluding Considerations

Political Economy

- Founding economics, crowded out by neoclassical construct
- Crucial for understanding present actuality
- Requisite for due diligence on climate \tau energy transition
- Energy transitions: thorough
 deficient
 - Renewable energy + efficiency
 energy 'Pantheon'
 - Interlaced with sustainable development

Energy Policy

- EU's inaccurate & flawed framing of energy issues
- 2014 restoration: vested interests capitalize on neoliberal ideology of the EU Commission
- Energy corporate stock-stakeholders master the discourse, influencing also scientific circles



Final Teaser

Adopt the right reference state & "discourse"

NOT

the obsolete, non-sustainable inherited, present state &

"integrating flow renewable power in electric power systems"

BUT

the requested 100% renewable future state

&

"nature provides the currents - humans adapt their systems and practices"