

THE POLITICAL ECONOMY OF ENERGY TRANSITION IN THE EU

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Overview

Political economy is the study of rational decisions in a context of political and economic institutions. Institutions influence choices at all levels of society. They appear as conventions, norms and externally sanctioned rules. The number of institutions and their diversity is large, encompassing for example natural and artificial markets, public regulatory offices, education curricula, societal discourse formation, etc. Political economy is a social science and an art when constructing comprehensive understanding of societal mechanisms and evolutions. Similar to icebergs, parts of the constructs are visible but many components and relations are not directly observable. Understanding is assembled by deduction, by creative linking of the separate evidences, by hypotheses that are not verifiable in a reproducible way. Practical political economy is incidental, with several cases revealing particular patterns, and fitting patterns summing up to societal realities. Energy transitions are such realities, one cannot grasp without a political economy approach.

Energy transitions have always been and continue to be prevalent factors in progressing human civilizations. Since 1945, five major evolutions characterize the wicked energy history of industrialized economies: (i) expansive growth of fossil fuel use with oil emerging as kingmaker since the 1960s; (ii) 'atoms for peace' (launched in 1953) announcing the predominance of energy from mass defects during the fission or fusion of atoms ($E=mc^2$), resulting in a full substitution of atoms mass defects for other energy sources, in particular coal as prevailing energy supplier in the 1950s; (iii) science & technology tremendous growth and diversification at continuously expanding speed and scope (in for example microelectronics, ICT, new materials, biotechnology); (iv) climate change, recognized as the greenhouse problem in the 1980s and brought to global attention by IPCC (created in 1988) and the Rio Summit (1992); (v) sustainable development, described by the World Commission on Environment and Development (1987) and adopted as default societal development paradigm by the world political leaders in Rio (1992). In 2017, (i) and (ii) are turned into incumbent lock-ins; (iii) is the pivotal game-changer; (iv) and (v) respectively push and pull the off-take of projected transitions toward sustainable, renewable energy sources and technologies.

A conference lecture is too brief to discuss the entire political economy of a comprehensive, long-lasting energy transition process. The selected political economy analysis deals with how renewable energy support in the EU changed in 2014, with a secondary case documenting how independent academics were barred access to discuss the events due to editorial capture at Elsevier's "Energy Policy".

Methodology

Political economy is the study of rational decisions in a context of political and economic institutions. Common is the economic aspect of rational decisions (maximizing goals with given means / minimizing means for reaching given goals). But, there is no established set of axioms, models, and methods to perform political economy studies. Every practical study depends on the context of institutions and on the lens of the author watching particular situations. For learning about a topic, various approaches are adopted, such as participatory action learning, observation, documentary analysis, discourse and conversation analysis, processing official documents and commentaries. A particular aspect of a larger societal process is explored by path-finding in press conferences, position papers, newsletters, informative sites (for example EurActiv, Energy Post), networking, and other sources. Sources controlled by partisan agents shed light on a case from different angles, and help the analyst in explaining the different rationalities involved due to diverging goals and means.

At present, political economy analysis is discussed and applied by official development aid agencies for assessing the impact of aid programs. The agencies interest in political and economic institutions corresponds to the actual importance of the political dimension in the Sustainable Development paradigm, notwithstanding the obscuring of the political by the widely advocated triple P bottom-line reduction.

Agencies employ analytical tools at three levels: macro-level (beneficiary) country analysis, particular sector and problem-focused analysis. The sector analysis tool pursues understanding the interests, incentives, actors and institutions operating within a particular sector. The EC framework includes four steps: (a) analysis of sector context; (b) mapping of interests, power and incentives for various actors; (c) analysis of governance and accountability relations; (d) analysis of governance reform readiness. Such sector approach is most suited to study the energy sector and its transformation towards sustainable solutions.

Political economy analysis is compared to the study of icebergs with major components and relations invisible. One cannot judge the value of the analysis by the standard processes of scientific verification (e.g. being replicable). Useful assessment criteria are for example plausibility of assumed goals and instruments of interest groups, rationality of the decisions, consistency between particular actions and observed effects. Small-scale qualitative studies can be used to draw wider inference about societal evolutions, provided that there is appropriate adherence to its boundaries.

Results

A political economy approach on crucial components and phases of the low-carbon energy transition in the post-war era is illustrated by the case of renewable energy support in the EU, in particular the significant redirection forced by the April 2014 new state aid guidelines. Related to the main case and overlapping in time, occurred the substitution of incumbent energy industry minded editors for a successful independent editor (Nicky France) at what was at that time the most influential academic journal on energy policy, alias Elsevier's "Energy Policy". Neo-liberal beliefs dominate the EU energy policy field. The idea of a single internal market for energy has been used as the ultimate Eden to reach. This goal was promoted strongest in the electricity supply industry. This illustrious case of confusing means and goals assigns more weight to 'market functioning above the policy goals of sustainability, affordability and security, adopted by the EU although without clarity about their definition and cascading interdependencies (different from the trilemma discourse). During the preparation of the first Directive on Renewable Energy (2001) financial support mechanisms were fiercely discussed. Neoliberal market believers proposed a single EU market for green certificates, with theoretical cost efficiency as argument. Germany rejected the uniform market theory approach to safeguard its functioning FIT system that provides well-dosed financial support to the development of various RE technologies. The EU solved the stalemate by letting member states choose their preferred instrument: tradable green certificates or technology support via FIT. The two approaches found advocates and critics in academic circles. In the beginning of the century the major power companies did not see the tremendous development capabilities of PV and wind power. The companies favored tradable certificate systems prioritizing mature biomass (including domestic refuse) convertors and allowing significant 'windfall' profits cashed by incumbent companies. Germany showcased the superiority of FIT in advancing a portfolio of renewable technologies with adjusted support depending on their state of development. After ten years of FIT the PV and wind technologies were maturing quickly, allowing the growth of small-scale electricity prosumers. The vested power companies were awakened by unexpected losses in market shares, and their standard business models based on coal and nuclear power generation were outdated. Renewable power generation (and for some, also nuclear) was going to be the only future. Their strategy was to redress their dominance by fencing prosumer growth by gaining prevalence for large-scale renewable projects (off-shore wind; PV arrays of tens to hundreds MW capacity). Along electricity-intensive industries, vested power companies lobbied administrations and politicians. In Germany the EEG 2014 was designed to rein in 'excessively' rapid renewable power deployment. On March 19, 2014 under the aegis of the Magritte Group the major European power companies issued a "call for government and state heads to implement immediate and drastic measures to safeguard Europe's energy future". On April 9, 2014 the EU adopted new "Environmental and Energy State Aid Guidelines for 2014-2020". The Guidelines make bidding systems the central support instrument for renewable power and ban FIT for most situations, thus abolishing a key instrument of Energiewende. The Guidelines have slowed down the dynamics of renewable technology deployment, and weakened the European position in renewable energy. In March-April 2014, a "Viewpoint" for the journal "Energy Policy" was edited for addressing the events and the expected impact by twelve scholars from nine countries. It was confronted by the new editorship of the journal, hostile to political economy analysis exposing the strategy and actions of incumbent energy corporates. Controlling the discourse on energy, renewable electricity growth and integration in power systems, and energy transitions, seems an important aspect of the incumbents survival strategy.

Conclusions

The transition to zero carbon energy supplies is the most challenging mission in the energy history of mankind. Because of rapidly evolving climate change, the transition is urgent, requesting steep ramping rates in realizing the thorough transition. Incumbent interests, tedious lock-ins in infrastructure but also in mental maps and discourses, override the imperatives of a sustainable development and retard the transition. Scholars analyzing the transition processes and activists wanting to promote the sustainable energy transition will benefit from the political economy perspective for understanding and predicting interference by incumbent interest groups.

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