

FACULTY OF HUMANITIES

MASTER OF ARTS IN INNOVATION AND SOCIETY



DIVIDED WE STAND, TOGETHER WE CHANGE

DISCURSIVE TRAJECTORIES ON ENERGY TRANSITION IN NORTH-WESTERN SWITZERLAND

Master thesis submitted by

Clarisse Aeschlimann

Supervisor:

Prof. Olivier Crevoisier, Faculty of Humanities

Expert:

Prof. Emmanuelle Reuter, Faculty of Economics

Neuchâtel, February 2020

TABLE OF CONTENTS

List of Figures and Tables	v
List of Employed Abbreviations	vi
1 Introduction	1
1.1 Initial Position	1
1.2 Research Interest	2
1.3 Central Argument and Contribution.....	3
1.4 Thesis Structure.....	3
2 Focus on Energy Transition	4
2.1 On the Overwhelming Significance of Energy	4
2.1.1 Biophysical Fundamentals and Boundaries	4
2.1.2 Industrial Predicaments	5
2.2 Energy Transitions in Switzerland.....	6
2.2.1 How Coal Conquered a Nation	7
2.2.2 Rise of the Age of Electricity and Fossil Fuels	7
2.2.3 Toward a Sustainable Energy System?	8
2.3 A Sociological Appreciation of Energy Transition	9
2.3.1 Energy Transition – Definitions and Origins	10
2.3.2 Infrastructures and Sociotechnical Embeddedness.....	12
2.3.3 An Understanding of Social Risks.....	13
2.3.4 Multi-Level System Transitions	14
3 Fostering Meaning in a Plurality of Discourses	17
3.1 Three Interconnected Approaches.....	17
3.1.1 Organisational Fields.....	17
3.1.2 Frames and Framing	19
3.1.3 Justification and Worthiness	21
3.1.4 Bringing Concepts Together	23
3.2 Current State of Research on Environmental Discourses	25
3.2.1 The Worthiness in Nature	25
3.2.2 Fields and Frames under the Prism of Energy Transition.....	28
4 Research Plan	31
4.1 Research Purpose	31
4.1.1 Research Question	31
4.1.2 Hypotheses and Probing Questions.....	32
4.2 Logic Of Research Design	33
4.2.1 Application of the Theory	33
4.2.2 Operationalisation.....	34
4.2.3 Regional Choice	35

4.3	Description of Measurement and Analytical Procedures	36
4.3.1	Codebook Design	36
4.3.2	Redefining the Sample	38
4.3.3	Data Analysis Procedure Description.....	39
5	Descriptive Results.....	40
5.1	Qualitative Content Patterns	40
5.1.1	Types of Actors and Actor Coalitions	40
5.1.2	Means of justification	42
5.2	Continuity and Alterations	44
5.2.1	Recurrence of Actor Groups and Tackled Themes	44
5.2.2	Commentaries and Opinion Papers	48
5.3	Thematic Trends and Controversies	50
5.3.1	A Cycle of Nuclear Rejection and Indulgence	50
5.3.2	Jumping on the Sustainability Bandwagon.....	55
5.3.3	Absent Theme or Next Issue?.....	59
6	Discussion	62
6.1	Hypotheses Review	62
6.1.1	An Allegiance to Performance.....	62
6.1.2	Closing the Loop.....	64
6.1.3	Stability Within Change.....	65
6.2	Argumentation Trajectories of Energy Transition	69
6.2.1	A Strategic and Coherent Transition	69
6.2.2	Searching for Consensus and Plurality	70
7	Conclusions	72
7.1	Summary Of the Research.....	72
7.2	Extensive Limits of the Study	73
7.2.1	The Drawbacks of a Systemic Research Approach	73
7.2.2	A Newspaper under Scrutiny	74
7.2.3	Introspection Disclosure.....	75
7.3	Recommendations for Further Work	75
7.3.1	Retracing Past Steps	75
7.3.2	Moving Forward.....	77
	Bibliography.....	78
	Annexe.....	84
	Footnotes Appendix	98

LIST OF FIGURES AND TABLES

Figures

Figure 1: Final Energy Consumption by Energy Sources (FSO, 2019a).....	6
Figure 2: Connexion Between Neo-Institutionalism, Framing and Justification.....	24
Figure 3: Yearly Count and Coding Status of Sampled Newspaper Articles.....	38
Figure 4: Approximate Proportion of Topics Appearing in Coded Articles per Year.....	46
Figure 5: Yearly Commentary Articles Respective to the Total of Coded Articles.....	48
Figure 6: Timeline of Major Events and Count of Thematic Appearances.....	61
Figure 7: Cartography of Organisational Fields.....	66
Figure 8: Schematised Progression of Political Positioning toward Energy Transition.....	67
Figure 9: Synthesis of Sense-Making Processes around Energy Transition.....	71
Figure 10: Research Interest of Energy Transition in Switzerland.....	84
Figure 11: Monthly Coding Status of Sampled Newspaper Articles.....	93
Figure 12: Timeline of Main Energy Transition-Related News.....	97

Tables

Table 1: First Codebook Draft for Qualitative Content Analysis.....	37
Table 2: Quantity of Statements by Actor Type and Political Orientation per Year.....	45
Table 3: Yearly Issued and Coded Comments per Actor Type.....	49
Table 4: Summary of Attributes of Each 'World Of Worthiness'.....	84
Table 5: List of All Retrieved Newspaper Articles and Their Analysis Status.....	85
Table 6: Inventory of Opinion Letters and Their Respective Quantity per Article.....	94
Table 7: Overview of Thematic Debates Through Time.....	96

LIST OF EMPLOYED ABBREVIATIONS

Denominations

CO ₂	Carbon dioxide
MLP	Multi-Level Perspective
NPP	Nuclear Power Plant
DNA	Discourse Network Analysis

References

WEF	World Economic Forum
FSO	Federal Statistical Office
SFOE	Swiss Federal Office of Energy
FCh	Federal Chancellery
AZ	Aargauer Zeitung

Political Parties¹

SP	Social Democratic Party
FDP	Liberal Party
GPS	Green Party
SVP	Swiss People's Party
CVP	Christian Democratic People's Party
BDP	Conservative Democratic Party
GLP	Green Liberal Party

*“Men divided the atom first,
but now the atom divides men.”
Gerhard Uhlenbruck*

1 INTRODUCTION

1.1 INITIAL POSITION

The energy transition is a convoluted and divisive subject matter and the current implications at stake are manifold. On the one hand, there is a circulation of bad press on some sources of energy compared to others. Among them, nuclear hazard presents dangers of radioactivity exposition as well as concerns about the millennia-lasting nuisance of radioactive waste disposal and storage. Likewise, discourse around climate change criticises the overreliance on finite carbon-based resources such as coal and fossil fuels and the effects they have on the increase of greenhouse gas emissions. Renewable energy sources are not devoid of critics either as their fluctuating performance and the intrusion into protected natural areas cause reservations among a part of the population. On the other hand, the ever-growing energy demand society asks for does not correspond with the biophysical boundaries of the Earth. The “vital interests” of society is called into question as fossil fuels currently account for about eighty per cent of global energy consumption and more than ninety per cent of global CO₂ emissions (Jancovici, 2019). As the overall energy consumption is steadily increasing, the stocks of raw materials are decreasing at a historically fast pace, along with fluctuating raw material prices that do not correspond to their effective market availability. Thus, the urge for reducing and optimising energy consumption is significant. Nevertheless, this postulate is nuanced by the development and deployment of new technologies along with new sources of energy which alters the equilibrium of energy supply. Furthermore, the energy sector, which transforms primary energy sources it retrieves from nature into ready-to-use secondary energy, is the industry that utilises the most energy and electricity production is the primary cause of CO₂ emissions worldwide (Frei, 2018). Indeed, the energy costs necessary to produce energy in the first place are tremendous. For instance, fossil oil extraction demands more and more resources and improved technologies to reach deeper into the Earth (Vidal, 2018). In sum, discussions around the energy issue are the set for perpetual debates around the most secure, efficient and least expensive technology mix.

Energy transition encompasses innately complex and tricky challenges because it presupposes a continuous questioning of current infrastructure systems and the necessity of reasoning in the very long-term. This imperative of perennial planning is hard to establish as there are a larger difficulty and insecurity to predict potential outcomes and because a multiplicity of actors with different interests have their say in projections of future energy systems. Decision-makers set up their resolutions with respect to data of the past and current state of knowledge, with no entire prospect of considering future technological progress. Therefore, both governmental policies and corporate activities need to continuously recalibrate their strategy at their own level according to new scientific breakthroughs and are concerned with making favourable

managerial choices, as past predictions often prove to be inaccurate (WEF, 2019; Steinberger, 2018). Socioeconomic and territorial specificities lead to a diversity of potential directions to take as well as a divergence of opinions on the solutions to be adopted (Smith, 2019). In order to take the most appropriate measures in this regard, it is necessary to keep a global overview of the energy infrastructure (Gauthier, 2019). Since energy transition is mainly problem-oriented, the dynamics of progress, as well as the dynamics surrounding the perception of this issue, have to be investigated. As Geels (2018) argues, “societal problems or ‘issues’ have their own dynamics in terms of problem definition and socio-political mobilisation”.

1.2 RESEARCH INTEREST

Debates around the issue of energy transition continue to fuel the public discourse as energy policy has been highly politicised since the beginning of the twentieth century. Technical questions that had long remained the prerogative of specialists become sensitive political themes (Marek, 2014a). The national energy supply landscape includes private and public actors that are subjected to the liberalisation of the market since the 1990s and undergo other economic, legal, technological, sustainable and social predicaments. Independently of their affiliation in the energy market, the diverse interest groups that constitute this industry mainly perceive risks and opportunities of the organisational field they belong to and might not see other consequences that appear beyond the situation they are in. Without any optimal or universal solution for each energy system scenario, experts on the field may disagree among themselves as all viewpoints have some valid ground to some extent. Disruptive propositions have hereof the propensity to generate controversies and maybe subvert the current climate of opinion. In that instance, the nuclear disaster of Fukushima in 2011 has mobilised the political agenda in an unprecedented manner since the beginning of the twenty-first century and may have at the same time deeply affected the public notion of energy transition as the alteration of the debate led policymakers to take adjusted measures on this issue (Frei, 2018).

Switzerland benefiting from the attributes of a democratic society, a multiplicity of divergent and sometimes contradicting opinions are taken into consideration and compared for the elaboration of the best possible planning and adjustment of policies given the circumstances. In the long tradition of direct democracy, public opinion plays a crucial role in political decision processes. Blumer et al. (2015) state that “shared conceptions of the energy system are necessary, but in place of a shared vision, the current societal discourse on the future of energy systems foresees numerous competing visions of an ideal energy system”. As time goes by and the current circumstances change, so do the discourses associated with the energy transition. Some statements may surface more frequently than others and some actors have fiercer positions than others. Thus, how is energy transition depicted in public discourse and how do its understanding and acceptance change over time? Considering the amplifying and opinion-making attributes of the media, what are these different viewpoints and how are they represented in the national media landscape? Which statements and what types of actors are present in the media arena and how do their argumentation change over time? Many questions about the perception and construction of meaning around energy transition are to be answered in order to make sense out of the complexity of this issue in the public sphere.

1.3 CENTRAL ARGUMENT AND CONTRIBUTION

For the scope of this study, we examine *what are the understandings and argumentative trajectories attributed to energy transition by mediatised actors in Switzerland*. The objective of this research is to conduct a comprehensive study of the notion of energy transition in Switzerland and to capture the evolution of discourses around this topic throughout the years. More precisely, we attempt to investigate the interaction between the manifestation of new events in relation to energy transition and their impact on public opinion. This study is meant to be of descriptive nature. We do not intend to emit judgement over different opinions, convictions and values. On the contrary, the aim of this research is to gather and acknowledge the various point of views converging and diverging over a specific issue reflected by the chosen empirical approach of content analysis chosen for this research. In place of cleavage between opponents and proponents, insightful argumentations and diverse perceptions are expected.

Building on several principles from the Science and Technology Studies which take the institutional contexts as well as several impact levels of technological prowess into consideration (Rip/Kemp, 1998), this paper attempts to tackle an intrinsic systemic issue in a systemic approach. Observations and findings of this research may lead to clarifications as of how a change in legal, economic, environmental and social values are induced through the portrayal of one specific issue by the media and subsequent reactions by interest groups and other actors of the civil society. In short, the overall dynamic around the topic of the energy transition will be monitored. Our systemic method will allow us to conjugate content analysis with actor analysis (Leifeld, 2010). Opinion- and sense-making is a recurrent theme in social research that tackle topics related to the energy transition (Blumer et al., 2015). However, to our knowledge, no similar study has ever been conducted of combining the individual theories that constitute our conceptual framework and utilising them in such fashion as to answer to a research question related to ours in the Swiss context (Isoaho/Karhunmaa, 2019).

1.4 THESIS STRUCTURE

Ensuing from this introductory section, we perform a literature review divided into two parts. The first one, in the second chapter, provides a formalistic background necessary for the understanding of the subject of study and thus covers an interdisciplinary comprehension of the energy transition with a focus on a social science perspective on the issue. The second part of the literature review in the third chapter exposes three theoretical approaches employed for the analysis that revolve around pluralistic sense-making processes. Subsequently to this conceptual framework, the fourth chapter formulates the research question and a set of hypotheses and describes each step of the empirical process employed to answer this research question. The fifth chapter presents a first examination of the content analysis results comprising of discourse patterns, argumentative trajectories and other noteworthy observations. Thereafter, chapter six is dedicated to a deeper analysis of the gathered findings as well as the answer of the priorly formulated research question and hypotheses. Finally, the seventh chapter marks the conclusion of this thesis, disclosing the limitations of this study as well as suggestions for further research.

*"It is not our wealth, which created our infrastructure.
It is our infrastructure that created our wealth."
John F. Kennedy.*

2 FOCUS ON ENERGY TRANSITION

Energy transition is recurrently referred to as the biggest challenge of the beginning of the twenty-first century because it affects numerous entities and players in the industrial, political and societal systems (Frei, 2018; Romerio, 2007). A constellation of actors, organisation forms and business models in the energy sector have to be recontextualised and reformed, including the interaction between these actors. In addition, a plethora of social practices need to be converted (Grunwald, 2012). Thus, the paradigm shift that such a transition represents requires a clear comprehension of the societal perception of energy: It can be defined as a commodity, an ecological resource, a strategical tool, a social necessity and an interpersonal construction (Teufel et al., 2016). According to Frei (2018), the concern for energy transition can be divided into five dimensions, namely in ecological, technical, economic, societal, and political dimensions. This chapter is therefore dedicated to introducing this issue in several academic fields, starting with a technological perspective. Thereafter, a historical overview of how the energy mix evolved in Switzerland throughout the centuries is provided in the second section of this chapter. The energy transition is then examined through a more sociological prism in the third section with the assistance of three conceptual approaches of social sciences.

2.1 ON THE OVERWHELMING SIGNIFICANCE OF ENERGY

This section pays heed to some of the physical and economic parameters in order to appropriately delineate energy transition. Thus, a brief overview of the industrial principles and stakes of energy is hereby provided.

2.1.1 Biophysical Fundamentals and Boundaries

In physics, energy is a universal concept that measures the interaction between different phenomena and stands for the capacity of a system to transform into another state. Transitory motion, rotation, vibration, heat, pressure, tension and gravitational force are some of the principal ways of generating energy. In other terms, conversion to energy occurs either through movement, or through modification of the molecular structure and dynamics of matter. These interactions are ruled by the laws of thermodynamics. The first law stipulates that once the matter has been transformed into energy, it cannot be reconverted into matter, unless considerably more energy is added. For instance, electricity can be generated out of coal, but coal cannot be generated out of electricity. In other terms, energy is not created but transformed out of natural resources. This fundamental principle of irreversibility is called entropy. Moreover, the second law of thermodynamics specifies that all energy conversions are less than a hundred per cent efficient in terms of available energy. In other words, and carrying on from the previous example, not all the potential energy contained in the coal becomes electricity.

Only a small percentage of energy conversion generates effective electricity while the residual energy is “lost” into heat. Based on this knowledge, questions of efficiency arise. In that respect, efficiency is rated according to a comparison between the amount of energy input and the resulting energy output. The problem of efficiency is the primary reason why coal is not suited for generating electricity in contrast to other sources of energy. Moreover, storing energy is a technical conundrum to this day as the quantity and quality of energy stocks diminish with time. Despite the development of new batteries proving to achieve more and more efficiency, they cannot bypass the laws of thermodynamics (Romerio, 2007; Girault, 2019).

2.1.2 Industrial Predicaments

The energy mix of a nation includes many diverse natural resources processed by many different technologies. Due to the engineering prowess required in order to plan and build an energy-generating facility, especially nuclear ones, their construction is tremendously expensive. Correspondingly, the lifecycles of these power plants are bound for lasting a considerable amount of time in order to obtain a justifiable return of investment. This is one of the main reasons why the activity of nuclear power plants (NPPs) prevails for half a century, but security concerns keep arising in particular regarding the disposal of radioactive nuclear waste (Romerio, 2007). With the pivotal change of paradigm driven by the Fukushima accident and the institutionally enforced regulations of the Energy Strategy 2050, many energy suppliers have to reinvent themselves. For electric facilities, the fundamental changes in the business environment that comes with the energy transition are specifically challenging, as these companies have traditionally been risk-averse and slow to change (Frei, 2018).

The energy sector has to respond to increasingly challenging objectives that often contradict themselves. One contradiction concerning network regulators is that they are mandated to ensure network supply security and efficiency at the lowest cost possible, thus jeopardising their duty through an imposed low price. Similarly, energy suppliers have the obligation to maintain an abundant energy output while simultaneously finding ways to save energy. In addition, despite the added value of clean and efficient energy-making with expensive new technologies, the overall abundance of produced energy lowers its selling price by the rule of supply and demand (Huguenin, 2016). Furthermore, this industry is challenged by an increased competitiveness on the European level as neighbouring countries sell energy for much cheaper than within Swiss borders. Domestic competition and infrastructural complexification of energy are also in steady development led by the raise of proximity energy networks implemented by individuals or enterprises which have installed small-scaled energy facilities on their own grounds (Swissgrid, 2015). In sum, there are conflicts in regard to concerns of security, efficiency and more recently decentralisation and environmental sustainability, all of them being related to questions of affordability (Ziegler, 2019).

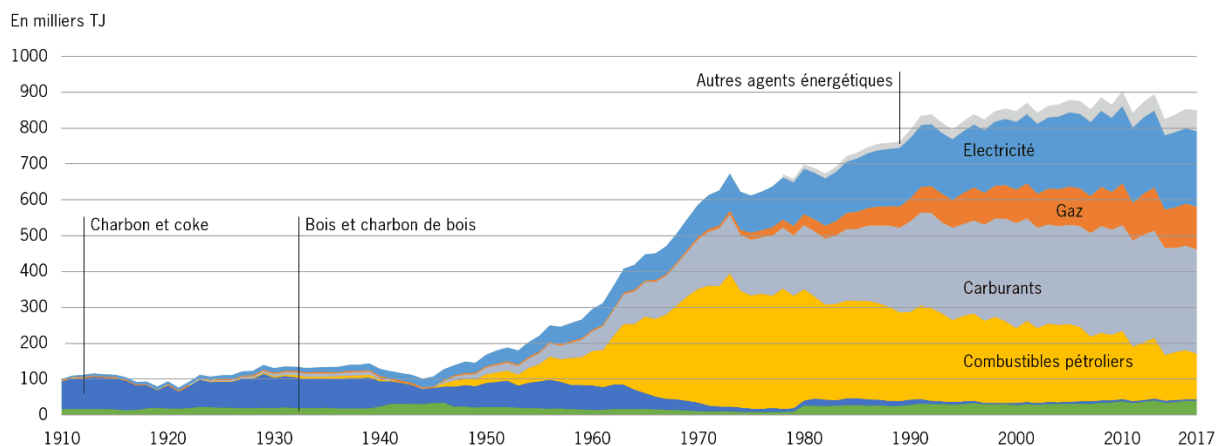
Although there is no direct causal relationship between energy consumption, economic growth and human development, modern human activity and well-being are strongly associated with improving living standards (Romerio, 2007). This correlation may even be reflected in utopian scenarios of the future, as they generally picture ways of living that depend on energy even more than it is currently the norm in post-industrialised contemporary societies (Timms et al.,

2014). Despite the increasing shortage in raw energy sources, future socio-economic development should not be constrained by resource availability (Rühl et al, 2012). Current strategies are therefore aimed at sustainable wealth while simultaneously reducing dependence on non-renewable energy carriers such as coal, gas or uranium (Frei, 2018). Except for the implementation of renewable electricity facilities, low-carbon transitions are progressing slowly (Geels, 2018). As of now, finite energy sources like coal, uranium, gas and carbon-based fuel account for ninety per cent of the worldwide employed energy resources, while renewable energy sources like water, wood, wind, geothermal and solar energy represent the remaining ten per cent (Jenden et al., 2019).

2.2 ENERGY TRANSITIONS IN SWITZERLAND

Switzerland, like many other countries, witnessed several energy transitions over the course of history. Relying on the following graph highlighting the national energy consumption over the last century, three phases can be identified. First, steady coal consumption was maintained until the first half of the 19th century, coinciding with World War Two. A transition occurred thereafter as new energy sources proliferated, and energy consumption consequently drastically increased until the first oil crisis in 1973. The use of petroleum-based fuels began to decline and to be replaced by combustibles and the consumption of gas and electricity increased over the past five decades.

FIGURE 1: FINAL ENERGY CONSUMPTION BY ENERGY SOURCES (FSO, 2019A).



The Swiss energy system is characterised by several attributes. First, as the country lacks domestic carbon-based resources and the demand is high, 75% of its energy demand is imported (FSO, 2019a). In consequence to its dependence from abroad, Switzerland is well integrated into the European energy system and has developed a flexible and robust network of import routes for oil, gas and electricity (Blumer et al., 2015). Second, the country does not have a very diverse electricity portfolio. Often referred to as a 'water country' for Switzerland's affluent hydropower potential, this resource covers barely 12% of the domestic energy supply. Third, the penetration of renewable energy sources is relatively low, corresponding to 10% of the nation's final energy consumption. Until recently, five nuclear power plants (NPPs) were in

operation and produced 35% and 9% of the national electricity and energy supply (FSO, 2019a).

2.2.1 How Coal Conquered a Nation

Historically, energy generation was essentially decentralised. The choice of natural energy sources was primarily determined by the availability of resources in a given territory. Indeed, transporting energy was fairly impractical and societies had to make do with what was locally at hand. In the case of Switzerland, its available primary resources were mostly wood, charcoal and other biomass (feedstuff and peat), watermills over river streams, and wind power for navigation to hasten waterway transportation. Therefore, the Swiss preindustrial energy-mix consisted of renewable energy sources as it was mostly the case then (Marek, 2014). An early form of energy policy subsisted at that time. Crude oil supply was secured by the authorities through restriction on trade and prohibition of forest clearing as wood was the most important energy source in those days. In contrast to these measures, however, the government did practically not intervene when coal was introduced in the Swiss market (Marek, 2012a). As indigenous coal was scarcely available, water wheels were of great importance at the beginning of the industrialisation era to facilitate labour. However, the increasing industry and growing population led to a booming firewood use which overstained the forests. In this effect, the appearance of imported combustible material prevented Switzerland from potential deforestation (Marek, 2014; Romerio, 2007).

Coal was first imported in the middle of the 19th century through a newly built railroad network which connected Basel to the German and French coal-mining districts. Indigenous coal was hard to come by while imported coal was very cheap and proved to have higher energy efficiency. From this time on and moving forward, there was an economic justification for transporting energy source over longer distances than previously commonly established. Although it could not fully replace firewood for the domestic use at first, coal went so far as to be the nationwide main energy source over the course of the industrialisation and the principal driver for the growth of energy-intensive industries. Taking this into consideration, coal combustion lays behind the extraction, transport and production of materials necessary for the building of hydroelectric power stations. By 1910, the Swiss primary energy input had quintupled: About sixty years after it was introduced, coal represented more than three-quarters of the energy input, followed by firewood which constituted about a sixth thereof. The remaining few per cents were secured by water and mineral oil (Marek, 2014).

2.2.2 Rise of the Age of Electricity and Fossil Fuels

Coal became very hard to acquire during and after the First World War. Switzerland grew to notice a dependence on France and Germany in that regard. This coal crisis drove to the foundation of a Federal energy policy which led the country to rely again on its national natural resources by widening the exploitation of hydroelectric power through dams (Romerio 2007).ⁱⁱ Hydropower partially replacing coal imports was also an incentive to establish an electric railroad network, in contrast to other countries at that time. Fossil fuels in the form of gasoline and kerosene started to proliferate as more diverse combustion engines and vehicles started to spread out. However, coal still remained the principal energy source until the 1950s, its scarcity

during the Second World War reminded the nation of its reliance on others yet again. Switzerland was in no position to bargain in front of its warmongering country neighbours (Marek, 2014).

The electrification of society facilitated comfort, prosperity and progress (Frei, 2018). Starting the second half of the 20th century, the Swiss energy demand structure changed considerably as the overall consumption increased more than threefold over the course of twenty years. Hydropower was not the biggest changemaker in terms of energy quantity, but crude oil was. Henceforth, more than three-quarters of the national primary energy input was provided by carbon-based fuel while coal only accounted for four per cent. With the exploitation of this energy source, lifestyles also began to change drastically. Oil-powered central heating allowed for a decrease of residents per households and an increase in living space per capita which then led to an energy consumption boost. Concerning mobility, the expanded availability of motorised vehicles enabled citizens to increase the spatial distance between their domicile and working place and to undertake even further journeys for their holidays (Marek, 2014). Electricity also began to take growing importance to domestic life as electric home appliances were getting more and more affordable. New technologies led to the mechanisation of households, allowing daily chores to be accomplished more swiftly. Furthermore, these user-friendly and gradually energy-efficient appliances increased energy consumption through more frequent use until this day, thus causing rebound effects. Herewith began the definite rise of consumer society (Romerio, 2007).

2.2.3 Toward a Sustainable Energy System?

2.2.3.1 Early Signs of another Transition

However, as the physical impact of changing consumer behaviour increased, so did the public discourse about the natural limits of growth (Marek, 2014). So far pushed by the race for ever-growing productivity, this world-conception started to display some discord as economists, scholars and members from the Club of Rome urged to cease embracing the idea of limitless access to resources. Indeed, a physical boundary seemed to be achieved at least concerning national hydropower capacity and global carbon-based fuels. The increasing electricity production driven by the steady construction of more and more dams fell short starting the 1970s due to an insufficient efficiency estimate out of the lasting possible affordable spaces. In addition, the growing contestation of people against deporting entire villages and altering landscapes was the more the reason not to continue extending flooding mountain regions (Romerio, 2007; Marek, 2014). Instead, the steady growth in electricity supply formerly provided by water was taken over by NPPs, which were initially introduced in Switzerland as a mean of experimentation for the military (Bühlmann, 2007).

Once more after the world war shortages in coal supply, the oil crisis of 1974-75 raised awareness of Switzerland's dependence on imported energy sources. Formerly optimistically perceived, nuclear fission also began to create debate during this period, in particular regarding the security of radioactive waste after the Chernobyl incident of 1986. Issues such as saving energy and the demand for environmentally friendly energies began to slowly take place on

the political agenda (Marek, 2014). Despite the rather indulgent energy policy so far, the Confederation intervened by means of assuring financial and supply security on the one hand and reduce energy consumption by promoting sustainable so-called alternative energy sources on the other hand (Huguenin, 2017; Marek, 2012a). Consequently, geothermal heating systems were introduced, and thermal power stations transitioned from heavy-polluting coal toward less-polluting natural gas (Romerio, 2007; Marek, 2014). Furthermore, this directive enabled the development of solar energy captured by photovoltaic cells in the 1980s (Marek, 2012b).

2.2.3.2 Incentives and hindrances

The opening of the electricity market to international competitors at the turn of the 21st century led to a conflicting predicament. The liberalisation of this sector sunk the electricity prices in Europe, thus putting pressure on the otherwise rather profitable business model of electric facilities (Frei, 2018). Since Switzerland is situated at the core of Western Europe's electricity network but first refused to open its energy market, negotiations in the matter of supply networks grew even more complex as responsibilities were redistributed (Marek, 2012a). The question of sovereignty over the energy supply has since then become a more present issue in the public discourse and as national energy intake was still on the rise, additional energy facilities were requested to provide to these consumption trends. Therefore, the construction of additional combined cycle gas turbines to those active in Western Switzerland is punctually envisaged (VSE, 2018). Projects of building new NPPs were contemplated by the Confederation in the noughties for national energy supply security but cut short shortly after the Fukushima disaster in 2011 (ibid.).

The government reaction toward the Japanese nuclear catastrophe led to the planning of national guidelines and targets in terms of energy strategy as well as the setting up of new energy supply regulations. Thus, after long deliberation, the Energy Strategy 2050 was established. It is based on four equally important and complementary pillars: efficient energy consumption, the extension and promotion of renewable energy sources, the progressive withdrawal of reliance to nuclear power and the importation of the energy shortage from abroad (Vuille et al., 2015; SFOE, 2018). In consequence, a popular initiative demanding faster measures regarding the nuclear phase-out has been submitted for voting in 2016 but did not obtain the absolute majority, contrary to the popular vote issued half a year later by the parliament for the total revision of the Energy Act (Federal Council, 2017). By the end of 2019, the power plant Mühleberg was yet the first Swiss NPP to have been definitively discontinued (BKW, 2019). In setting up executive prescriptions and legislations, the nation shows dedication to concretise a new energy transition towards sustainability in every sense of the term. This disposition is however not devoid of pitfalls and shortcomings, as energy management is a challenging endeavour as alluded to in the first section of this chapter.

2.3 A SOCIOLOGICAL APPRECIATION OF ENERGY TRANSITION

The topic of energy transition is usually reviewed in a techno-economic dimension, thus overlooking important social features like public engagement, social acceptance and political feasibility (Geels, 2018). In an effort to subdue this issue, this section is therefore dedicated to

grasping the sociological implications of the energy transition, starting with the definition of the concept.

2.3.1 Energy Transition – Definitions and Origins

2.3.1.1 Origins

The notion of energy transition can be traced back prior to the publicly effective awareness of the imminent consequences of nuclear disasters or climate change (Aykut/Evrard, 2017; Grunwald, 2012). Despite the Club of Rome issuing their report on the limits of growth in 1972, the first actual appearance of the notion of ‘energy transition’ emerged in the mid-1970s in Amory Lovin’s article “Energy Strategy: The Road not Taken” (Frei, 2018). In addition to introducing his readers to the unsustainable and environmental risks of nuclear fission and fossil fuels, the author depicts how two mutually exclusive paths stand before any industrial nation: The hard path and the soft path. The former one is a path of centralisation and focusing on increased energy supply, thus corresponding to the infrastructure that was either broadly recognised as the norm at that time, or to be the rightful and appropriate energy system to strive for because of its apparent security and high performance. The latter, soft path is one of decentralisation, focusing on the efficient energy supply and consumption and transitioning towards a low-carbon or even fossil-free future by the means of using sustainable energy sources (Lovins, 1976). For the first time, society started to envision multiple energy futures not only dictated by the pre-existent availability of infrastructures, but offering the possibility to be supplied by alternative technologies and carbon-neutral fuel sources (Grunwald, 2012). These observations resonated with worldwide contemporary debates as the anti-nuclear movement started to earn attention, punctually fuelled up by the NPP disasters of Chernobyl and Fukushima respectively, and economical drawbacks over resources like the first and second oil crises. As a result, the plurality of energy futures was widely acknowledged across various audiences (Grunwald, 2012, Chateauraynaud, 2011). Incidentally, putting emphasis on the multiplicity of energy futures, one might therefore refer to these prospects in the plural form and speak of ‘energy transitions’. Despite initially discussed upon as controversial, energy transitions progressively gained a foothold as the foundation of a new global consensus (Aykut/Evrard, 2017).

2.3.1.2 Definition

A simple way of defining energy transition would be “the switch from an economic system dependent on one or a series of energy sources and technologies to another system” (Sovacool, 2015). However, although the notion of energy transition has been prevalent for almost half a century, an exact and commonly accepted definition has yet to be specified in academic literature. As various perceptions and values on the ideal energy-mix coexist, so do the different conceptions around energy transition suggested by scholars. Hence, the inexistence of a settled definition may mirror the different opinions around possible energy futures (ibid.). This lack of resolution over energy transition echoes the understanding that issues are not objectively attached to one particular meaning. A sense is constantly and punctually given to issues, progressively altering with time and throughout different contexts (Litrico/David, 2017). As the current understanding of energy transition may revolve around a low-carbon or nuclear-free

transition, the term is often employed in conjunction with sustainable development. Similar to the former term, sustainable development is not devoid of contention when arguing about its meaning as a particular vagueness surrounds the notion with many definitions and conceptions that contrast each other (Godard, 2004). Most commonly, sustainable development involves on the one hand meeting the needs for today's generations, while on the other hand avoiding compromising future generations to meet their needs in turn. Critics characterise the principle of sustainable development as inconsistent as it continues to pledge for economic growth and consumption, notwithstanding that such practices led to the concern of sustainability in the first place (Romerio, 2007).

In contrast to sustainable development, however, there is a common understanding of specific underlying themes orbiting around energy transition: "The concept of 'energy transition' is based on the notion that a single energy source, or group of related sources, dominated the market during a particular period or era, eventually to be challenged and then replaced by another major source or sources." (Sovacool, 2015). Frequently mentioned attributes of what constitutes energy transition include three major motives. On the one hand, the energy transition is recognised as a change of fuel sources and their corresponding technologies, putting emphasis on a historical take of previous energy shifts which occurred since the industrialisation era. On the other hand, attention is given to the manner of extraction of said resources, scholars stressing a shift in energy production and the technologies used to exploit that energy. In some sort, this notion might highlight the inherent shortcomings of the energy sector which is, as mentioned in the introduction, the most 'energivorous' of all other industry sectors (Girault, 2019). Finally, the notion of energy transition refers to a particularly significant set of changes to the patterns of energy used in a society, which potentially affects resources, carriers, converters, and services (Sovacool, 2015).

Energy transition is apprehended by an understanding of systemic change, thereby putting emphasis on the modification of an 'energy system as a whole' and going beyond the replacement of a former technology into a new one (Grübler et al., 2016). A single object focus on technology might appear less complex and easier to grasp but in doing so, the overall view of the issue might be left out. By neglecting political and social dimensions of energy systems, one may fall short on comprehending and contributing to the discussion on future energy-mixes (Sovacool, 2015). Indeed, energy transition comprises as well political than social implications. Politically speaking, it translates into a similar conceptual and procedural understanding to the likes of an institutional change. Both understandings imply the shift between two supposedly stable circumstances and concerns involving an institutional legacy, as well as actors who carry out the transition from one state to another. Thus, energy transition comprehends the premise of a 'path' towards change and sustainability (Aykut/Evrard, 2017). However, in comparison, the political implication of energy transition does not coincide with the implementation of any given public policy. The political use of the notion of transition is perceived as very ambivalent because as institutions convey the will of change, they are simultaneously protecting the existing regime. Hence, the scope and contents of implied transformation intents are hindered by several processual and administrative boundaries (Chateauraynaud, 2011, Aykut/Evrard, 2017). Further insights on social stakes of the energy transition are explored in the three following subsections.

2.3.2 Infrastructures and Sociotechnical Embeddedness

As human activity deeply relies on energy-based commodities and current infrastructures virtually function only through them, one might say that energy constitutes the basis of modern society itself. Indeed, economically speaking, value is gained through the exploitation of raw material, enhanced by the potential usage that is attributed to them by human knowledge. Natural resources are therefore not only recognised as generators of energy, but also as generators of economic value. In a more sociological point of view, however, one might be susceptible to portray this human-nature relationship as a symbolic or utilitarian projection induced by social actors towards the environment based on their theoretical knowledge, personal experience or memories (Droz et al., 2013). In this spirit, “every landscape is a forgotten social construct” (ibid.) and ‘natural resources’ are as socially constructed as are cultural heritages and technical knowledge (Crevoisier, 2016).

Comparable to this social normalisation of natural resources, upcoming transformations embedded in the course of the energy transition ought to be understood as a social process and not as a sheer technical issue. This resonates with Schumpeter’s postulate that society adapts itself from the available and proposed technology and not the other way around. In this effect, it is reasonable to appreciate the notion of a changing energy system as an infrastructure which comprises a constellation of technical artefacts that are in turn strongly interrelated to social, scientific and cultural components (Grunwald, 2012). This socio-technical system can be virtually perceived as a texture, a grid composed of tightly intricated relationships of social practices and technologies. Due to their innate interdependence, any possible alteration of either the social or technical components that shape the infrastructure has the possible consequence of deeply impacting its adjoining features. That is, when attempting to modify one parameter of the infrastructure, deeply embedded connections between its various components are jeopardised (ibid.). In management theories, this predicament may be assimilated to the concepts of externalities and spillover effects. Indeed, both notions also assume courses of action potentially leading to unforeseen, unintended or undesirable consequences (ibid.), which indirectly may or may not benefit third parties. In this effect, small changes might induce high interferences in neighbouring systems, ultimately turning into indefinite systemic alterations.

Such entangled infrastructures originate from a co-evolution of technology and society that are determined by a coordinated adjustment between supply and demand. The demand for existent infrastructural services stimulates the development of technologies. As soon as they are installed, infrastructures retroact on society by thrusting individuals to accommodate themselves to the new functions and properties provided by improved technology. In other words, technical advancements are incorporated into newly shaped social practices and processes and with time, become a ‘second nature’ for the users of new technologies. Conclusively, sociotechnical systems undergo a reconfiguration between improved technical abilities as well as organisational and social relations, which grow the more complex as technological progress is being made (Grunwald, 2012). In turn, as the complexity of infrastructures increases, individuals grow detached from the core elements constituting the systems by which society is based on. Applied to the energy system, people experience estrangement from raw energy sources as fuel and electricity are subject to complex processes and logistical conditions. For

instance, it does not conventionally occur to individuals to wonder what technicities lay behind plug sockets or gas stations; these appliances are not interesting from the consumer's point of view as long as they provide the desired facility service and function according to their expectations (ibid.). Interest only starts to emerge as individuals grow aware of the detrimental side-effects of some energy sources, such as provoking greenhouse gas emissions, disfiguring the landscape, cause safety and sanitary risks or overall damaging the environment. Moreover, the costs play a crucial role in the supposed bewilderment of end-users to primary resources. For instance, an increase in the energy tariffs challenges consumption habits, thus leading to an active perception of the intricateness of sociotechnical connections in the system (ibid.). This disentanglement of individuals from their passive role initiates their claim for change, as the French yellow vests movement made explicit. Infrastructure transformations have irremediable social consequences that arise not only from the alteration of technological and social features, but also from an overall tense and uncertain social regime.

2.3.3 An Understanding of Social Risks

The concept of world risk society ascertains how society is increasingly concerned with debating, preventing and managing global risks that are the direct consequence of technological progress. The emergence of risks such as climate change and nuclear hazard does not necessarily imply that the world has become more dangerous, but that more uncertainties are implicated. Risks are referred to as the anticipation of catastrophes that are dealt with the principle of precaution by prevention. Global risks differ to any occurrence humanity has ever encountered before, both in scale and in complexity (Beck, 2012). With respect to their scale, modern risks may have massive and irreversible effects which may exceed national boundaries and bear global repercussions. Regarding complexity, global risks lack clarity and comprise intertwined factors as discussed in the previous subsection. These entangled components hinder scientists and experts to evaluate causal relations and collateral damages, which have themselves knock-on effects on other systems. Moreover, the exposure to danger is not perceptible by human senses, which makes it mandatory for threats to be measured by using specialized tools (Beck, 1986). Thus, society is increasingly dependent on competencies both from the part of technical ability as well as institutional control procedures (Grunwald, 2012). This reliance on external expertise to evaluate risks is more threatening for mankind as they may be bereft of their own power of judgement and agency. Hence, these risks are referred to as high consequence risks. As these risks are inherently associated to many of the aspects that constitute contemporary societies, they affect people with a radical sense of dread, vulnerability, denial, and loss of control, which in turn affect their behaviours (Beck, 1986).

Due to the complex and highly technical character of global risks, society and politics rely heavily on scientists and experts to analyse and communicate the exact nature of the danger. Nevertheless, modern risks often exceed the capacities of both science and politics to analyse and manage them (Beck, 1986). Decisions have to be taken in the present on account of current scientific estimates that tend to change over time as they depend on the state of knowledge over future developments. In other words, the body of knowledge cannot be anticipated as it is continuously formulated based on real-time data (Grunwald, 2012). The complexity and nonlinear causalities of these risks imply incalculableness, uncertain scenarios for

scientists and experts which makes it difficult for them to address and even harder to predict. However, governments expect reliable and sound scenarios in order to take appropriate measures towards that risk (Beck, 1986). For instance, the appraisal of sustainable energy supply capacity alters as soon as new findings of these technologies are available. As a result, despite transition policies having settled goals, energy strategies themselves are not as outlined as they are expected to be, as they do not define how these goals are to be achieved (Grunwald, 2012). These strategies function like an incomplete nautical chart at sea; in a moving environment, the directions have to be readjusted continuously while moving forward as features change constantly depending on how far we have progressed. In turn, this is a very delicate endeavour as the energy infrastructure is meant to be long-lasting and any alteration seals a part of the future as path dependencies (ibid.).

As both science and politics have different aims and obey different rules and norms, dissatisfaction may occur on the part of experts, as their science-based opinions and proposed measures are not implemented to their accord. On the other hand, decision-makers express disapprobation especially when such measures require changes that either are expensive or go against the spirit of modernity and productivity. In addition, national governments encounter further challenges when hazards reach out of their territorial custody, and setting diplomatic arrangements also complicates and delays risk management (Beck, 1986). The many obstacles experienced over the course of a crisis by the scientific and political spheres also have legitimacy consequences toward the general public. In the beforementioned conditions, it is hardly possible to provide legitimacy and coherently integrate decisions with their consequences and implications. Citizens grow aware of the authorities' incapacity to efficiently anticipate and supervise abnormal events and thus lose trust in the very institutions supposed to provide them with confidence and security (Beck, 2012). In this effect, risks have a function of enlightenment: If the appropriate knowledge is not available in sufficient fashion, other means of opinion-making are employed in the likes of guesses, fears, ideologies and strategic narratives. The less positive and recognised knowledge is available, the more normative convictions and values have to be relied on, and the harder it is to concretise concerns and compromises (Grunwald, 2012). The public perception of risks may generate the urge for finding solutions and mobilise society by forcing individuals to collaborate where otherwise they would not want to have anything to do with one another. On a wider scale, governments also experience a turnabout in their priorities and start to cooperate with each other, thereby cutting through their national self-sufficiency. As the anticipation of catastrophes is consequently even more empowered the more people take action against them, the cooperation with international actors may allow institutions to regain legitimacy among their citizens (Beck, 2012).

2.3.4 Multi-Level System Transitions

By destabilising the existing order with their ensuing uncertainty, the anticipation of catastrophes have by extension the capacity for construing new institutions (Beck, 2012). Approaches deriving from the transition studies such as the multi-level perspective (MLP) tackle the process of systemic change (Huguenin, 2016) and are thus appropriate for describing energy transition. The MLP analysis outlines how dynamics evolve over time through three interrelated

and nested levels. On the lowest micro-level are 'technological niches', an aggregation of leading-edge and unconnected beads. The niches' means of subsistence are assured by upper levels by way of protective policies and other incentives. The middle level is one of 'sociotechnical regime' that involves infrastructures, social networks and techno-scientific knowledge (Geels, 2005). Bringing together a diversity of actors, this level assures system stability when these groups of actors are 'aligned' together in contributing to the reproduction of the socio-technical regime (ibid.). In other terms, the regime subsists as long as its structure is maintained. A regime is not inherently fixed but might experience change within itself without witnessing any structural evolution, leading to path dependences, lock-ins and inertia (Sovacool, 2015). Regimes are settled in the higher macro level of 'sociotechnical landscape', which also includes elements external to the regime such as political systems, material and spatial arrangements as well as macro-economic factors. Although principally stable, the sociotechnical landscape may be subjected to tensions which create a window of opportunity for changes in this level.

The seeds for systemic change reside in the micro-level, as social and technical novelties that emerge from niches differ radically from the established regime and landscape. These niches destabilise higher levels through their radical technological breakthroughs. If niches pressure a regime in a significant manner, for instance through a widely diffused new technology, the regime is disturbed and converges progressively towards the niche's bearing and 'adjusts' its policies, infrastructures, lifestyles and value representations (Geels, 2018). In the long term, changes induced by niches and embodied by regimes end up altering the sociotechnical landscape itself (Geels, 2005). In other words, "big transitions are the sum of many small ones", which can be exemplified for instance with the conversion from steam engines to diesel combustion (Sovacool, 2015). The success and promulgation of breakthroughs developed by niches depend on their innate attributes, complementary technologies and infrastructures, support from powerful actors, scale and learning economies as well as positive discourse on the matter (Geels, 2018). A truly transformative change is fulfilled as adjustments occur across every level of the system, simultaneously altering technologies, policies, regulations, economies of scale and price signals as well as social behaviours and values (Sovacool, 2015).

Although the MLP approach is not fitted to take account of transitions between various socio-technical systems, when applied to the energy sector, systemic change may precisely take place through interactions between several structural feats (Geels, 2018). For instance, independently from the big investments allocated to renewable energy technologies, one principle weakness they represent is its sources' supply irregularity that depends on "nature's goodwill to make the wind blow or the sun shine" (Charlez, 2019). In order to secure unconditional and continuous energy supply, this intermittent characteristic has to be balanced by more reliable energy sources that are able to provide electricity on any occasion such as carbon-based and nuclear power. Therefore, two or more shifts have to take place in order to result in one combined effect, as one requires the adoption of the other (Sovacool, 2015). Thus, a low-carbon energy transition is built upon renewable energy and hybrid technologies on the one hand, but also on technologies developing a corresponding electricity network expansion as well as energy storage optimisation on the other hand. Accordingly, new business models have to be established and market arrangements reformed, in order to host these new technical features

in the industry. Only together are these new technological settings capable to transform the entire electricity system (Geels, 2018).

However, due to their high financial costs for an expectedly long lifespan of energy facilities, issues of affordability and insecurity of measured efficiency hinder the effective implementation of unprecedented energy infrastructures. Therefore, in order to apprehend their complexity, the novel settings that constitute shifting technologies can only be carried out on a decentralised and small scale. In this fashion, necessary adjustments can easily be detected as net efficiency is more tangible in a small scale. In addition, these projects function as technology demonstrators that give the opportunity for experts to learn from them and conceive improved versions of these prototypes (Grunwald). As mentioned in the previous subsection, governmental strategies have only set up a rough orientation on which direction to take as external conditions are continually changing over the course of the energy transition process. Thus, the transformation of the energy system can only be apprehended as a permanent learning process, by which each step occurs incrementally despite the long-term objective of this transition (ibid.).

“Good sense is, of all things among men, the most equally distributed; for every one thinks himself so abundantly provided with it, that those even who are the most difficult to satisfy in everything else, do not usually desire a larger measure of this quality than they already possess.”
René Descartes.

3 FOSTERING MEANING IN A PLURALITY OF DISCOURSES

This chapter presents three complementary conceptual approaches serving as a basis for the empirical pursuit of our research question. The first section provides an elemental understanding of each theory. A thematic linkage is thereupon conceived between the three approaches. The second section discloses selected research outputs in connection with both the theoretical framework introduced in the first section as well as insights related to the subject of research.

3.1 THREE INTERCONNECTED APPROACHES

3.1.1 Organisational Fields

3.1.1.1 *Origins and Definition*

The notion of organisational field originates from sociological neo-institutionalism. This school of thought was conceived as a counterproposal to the theory of rational choice, (Hasse, 2012). In this spirit, neo-institutionalism explores how contextual frameworks emanating from systems of organised responsibility affect the behaviour of organisations and society. In other words, this approach “emphasizes how wider sets of rules and beliefs fundamentally constitute actors, and how cognitive, normative, and regulative pressures lead to a legitimacy imperative”, thereby “taking account of the transformation and change of institutions, as well as the heterogeneity of actors and practices in fields” (Lounsbury/Zhao, 2014). Although the neo-institutionalism initially sought to “explain homogeneity, not variation” (DiMaggio/Powell, 1983), the comprehension thereof progressively expanded with time, replacing corresponding concepts of inertia or separation with their opposite (Hoffman/Ventresca, 2002).

With reference to institutions, the notion of organisation is hereby understood in the three following ways. On the one hand, organisations are embedded in an institutional environment as they have to comply with the constraints and rules of how organisations are expected to behave. On the other hand, institutions are present *within* organisations, as specific internal norms and practices are expected by and from organisations. Finally, organisations are on par with institutions as they both constitute a central and self-evident part of society (Hasse, 2012). While neo-institutional studies often apply an understanding of organisations in a narrow sense of the term by focusing on companies, it is not unusual nonetheless to come across scholarly articles that view organisations in a more abstract, broader way as communities of actors sharing the same agencies and constraints (Lounsbury/Zhao, 2014). These clusters of actors or rather ‘organisational fields’ share the same values and beliefs over one specific issue and are shaped by their common interests and objectives (Hoffman, 1999). Following the tradition of

symbolic interactionism, organisations are defined as entities influencing their environment as much as they are subjugated by other actors in that same environment (Litrico/David, 2017). Aggregating groups of actors into categories is useful for grasping some of the mechanisms of the social system as it facilitates the recognition of shared understandings and common practices dominating specific linkages between the network of concerned actors. In this effect, neo-institutionalist research seeks *inter alia* to analyse the emergences, changes and impacts occurring in organisational fields. More broadly, this approach examines “the social construction and consequence of meaning systems, since they carry institutional prescriptions” (Lounsbury/Zhao, 2014).

3.1.1.2 *Change-inducing events*

Despite the need for consistency in actor coalitions in order to preserve organisational fields, these are influenced by social and institutional dynamics that might create discord within the same field (Leifeld/Haunss, 2012). As actors are brought together by a shared understanding around an issue and issues do neither have a universal nor permanent meaning, the very existence of organisational fields is constantly challenged (Litrico/David, 2017). Therefore, members of a specific field might shift sides if they do not adhere to the opinion represented by the coalition they belong to. Over the course of a debate, other statements emerge or disappear as well as do actors constituting organisational fields. In short, the debate and the actors leading the discourse evolve and are reconfigured over time. Thus, this reciprocal process highlights the coevolution of actor networks (Lounsbury/Zhao, 2014). This modifies the way statements are interpreted, permitting a shift in the dominant statement holder. Therefore, “to fully appreciate the complexity of institutional dynamics, one must analyse both the specific institutions that lie at the centre of an issue-based field and the competing institutions that may lie within [...] that field” (Hoffman, 1999). Social and institutional dynamics are caused by disruptive events and appear for instance through catastrophes or the execution of new policies. Consequently, they create uncertainty among organisational fields, forcing them to adapt with unprecedented actions that “diverge from established practices” (Hoffman, 1999). In other words, what previously seems unconceivable is embraced as an opportunity in order to change the status quo into something completely new. Disruptive events might cause an alteration in the perception of specific issues and are therefore central in explaining changing processes.

3.1.1.3 *Toward a Collective Rationality*

As organisations are embedded in cultural frameworks, they are influenced by their surroundings in a comparable fashion, ultimately leading them to adopt similar structures. In other words, coalitions of actors experience a symbolic adjustment on higher-level expectations of institutions or the public opinion (Hasse, 2012). Not withholding their agency, organisations move towards conformism in an intended as well as constrained manner, achieving some form of collective rationality (Hoffman/Ventresca, 2002). This process of conformity to institutional prescriptions within a field is understood as ‘isomorphism’. Three main institutional pressures lead to isomorphism. Coercive pressures are performed by authoritative entities external to the organisation and consist of persuading, threatening or applying force in the form of government regulations or lawsuits for instance. Mimetic behaviours are triggered when organisations are

subject to uncertainties, consequently referring to the attitude of their peers and imitating them. Last, normative pressures emanate from professionals and experts who promote standards, models of success and conventional wisdom, thereby attempting to normalise appropriate behaviour in the process (DiMaggio/Powell, 1983).

Isomorphic organisations are however not necessarily driven by institutional or public requirements, but also adapt in order to gain legitimacy among multiple audiences. The strive for legitimacy is therefore a strategical issue. In addition, literature differs as of whether and to what extent organisations chose to adjust themselves to institutional prescriptions in lieu of developing their own distinctiveness and contrast from peer organisations (Lounsbury/Zhao, 2014). Conclusively, the diversity of organisational behaviours and logics displays the innate interest of the neo-institutionalist approach for the multiplicity of meaning systems. The next subsection focuses precisely on how the attribution of meaning influences the common understanding of reality.

3.1.2 Frames and Framing

3.1.2.1 Description and Rationale

Framing is “a process of reality construction consisting of the labelling of a specific present experience using frames and categories derived from past experience” (Litrico/David, 2017). They provide a lens through which individuals are able to interpret subjects devoid of objective meaning. Derived from Erving Goffman’s concept of schema, framing shapes the manner in which society can be perceived. Framing is also related to the agenda-setting theory which underlines how the display and quantity of media coverage shape public opinion (Bonfadelli/Friemel, 2011). Framing is defined by Entman (1993) as „select[ing] some aspects of a perceived reality and make them more salient in a communicating text, in such a way as to promote a particular problem definition, causal interpretation, moral evaluation, and/or treatment recommendation for the item described.“ In other words, when an issue is depicted from a specific point of view, frames construct and alter the perception of this issue through the selection, omission, or accentuation of specific attributes. In this effect, agenda-setting rises awareness, salience and priorities, while framing highlights a topic in a specific manner. Thus, if agenda setting presents the same features as a spotlight by displaying only what the content creator intends you to see, framing consists of tinting, dimming or brightening this light in order to recontextualise or decontextualize the displayed content. Also referred to as second-level agenda-setting, framing occurs through selection, omission, or accentuation of specific aspects of an issue (Bonfadelli & Friemel, 2011). The meaning or message does not only give access to a piece of information over a specific topic, but is also reinforced by the manner or strategy employed to define a specific interpretation framework, by means of which information may be appropriately classified and processed. Consequently, the same information processed by several different narratives has different effects on the recipients as framing influences the way that information is interpreted and might lead to the formation of stereotypes. If these effects may occur unconsciously, they can also be deliberately put in use for strategic purposes. Indeed, through this phenomenon, some actors and arguments might acquire more

legitimation than others; dominant frames therefore conducting to the realisation of actions in their favour (Marcinkowski, 2014).

3.1.2.2 *Strategic framing*

The importance of framing is strong in particular in the context of crisis. When a fast reaction is necessary and it is required to provide as much as possible information over a specific issue, the danger consists of prioritising some facts over others, thereby (un-)willingly promoting one single understanding of events at the expense of any other mean of interpretation (Raupp/Völker, 2014). As such, it may prove useful to address strategic takes on the concept. The construction of strategic frames and framings ensue in an iterative process. The actor is confronted with a specific problem while at the same time being oriented towards the strategic context. Thus, the creation of a frame is situation-specific in two ways. On the one hand, it depends on the strategic organisational setting, or in other words the institutional structure and conditions of the medium in which the frame appears. On the other hand, the frame takes a different meaning according to the overall situation, as the current climate of opinion over the matter. Thus, strategic framing is gradually developed and adapted in interaction with the perceived environment (Raupp/Völker, 2014). A purpose accomplished by strategic framing is to reduce the complexity of issues and to provide orientation in the agency of actors (Raupp/Völker, 2014).

Different typology frameworks coexist and partly overlap among scholars, of which three approaches will be briefly mentioned. First, strategic framings can be monitored according to their persuasive intent. Thus, 'emphasis-framing' influences a limited selection of compiled information according to certain common principles, whereas 'equivalency-framing' affects different representations of logically equivalent action alternatives (Kohring/Potthoff, 2014). Bonfadelli and Friemel (2011), suggest three types of strategies. On the one hand, the 'diagnostic' frame consists of depicting problems and to allocate blame onto a specific target. On the other hand, 'prognostic' framing seems to constitute the opposite: its task is to display solutions and strategies to overcome the problems it highlights. The third and last function of framing is 'motivational': this framing calls for action and mobilises sympathisers to an issue, sometimes attempting to weaken its adversaries. Second, Hänggeli and Kriesi (2010) introduce three sets of opposing strategies. Not unlike to the diagnostic and prognostic frames, subsists the antagonism between 'process-oriented' frames which concentrate on the planning and implementation of a topic of interest, versus 'content-oriented' frames which focus on resulting objectives. The other two sets are self-explanatory. Positive and negative frames mediate valence, whereas offensive and defensive frames mediate salience.

3.1.2.3 *Change of Frame*

As they derive from culturally acknowledged information and aim to create a shared understanding over particular issues, frames both assign commonly accepted meaning as well as create a new meaning to current issues, thereby "constructing the very nature of the issue itself" (Litrico/David, 2017). Thus, frames only become apparent once their meaning has en-

tered into force and taken effect. It is however possible to observe a change of meaning, leading to new ways of thinking about the environment. There are different scales by which frames are comprehended. On a 'micro' level, the emphasis is put on the individual analogical reasoning and the new ways of which the environment is perceived. A modification of framing on an individual level can be observed either by comparing or by blending several frames together and deriving new interpretations out of them. In contrast, on a wider 'macro' setting, the issue of framing evolution lies on how a common ground is built among a collective of actors. In order to reach a consensus, the frames undergo a process of conventionalisation as they are widely diffused across the community. In the process, their notion becomes abstract and is open to different sets of meanings. Eventually, the frames become 'naturalised' in the institutional discourse; the community subsequently forgetting where the frames first originated from (Cornelissen/Werner, 2014). In this effect, the implication of a change of frame converges to the situation-oriented condition in which a strategic frame is constructed. This is of no surprise as the aim of a strategic frame is to create a long-lasting groundwork in which issues can always be re-classified. In times of insecurity and crisis, this approach is considered as being particularly crucial for the actors, as strategic communicative agility can be secured (Raupp/Völker, 2014).

In order for the change of perception to take effect, an internal coherence has to be maintained between the two frames by way of justification, a common thread of some sort. Drawing further on the theory repertoire of social sciences, the next section introduces a complementary theory that adds up to the framing approach by providing a theoretical framework that facilitates to some extent the understanding and process of reasoning and sense-making. Despite its apparent level of abstraction, the justification theory and in particular the concept of economics of worth might prove itself quite useful in that regard.

3.1.3 Justification and Worthiness

3.1.3.1 Basic Premises

For the purpose of establishing a common understanding over a situation or an issue which concerns a variety of individuals, means of justification are required. They are employed in the form of first-hand conventions, a register of arguments grasping particular sets of beliefs and values. By mobilising these sets of arguments, the reasoning that led to the embodiment of common values is legitimised and a collective agreement may be achieved over the issue. Thus, in a matter of speaking, an agreement between a group of people bestows validity and legitimacy upon an issue (Godard, 2004). Each person on par with a specific logic of belief is able to identify with and orient themselves to specific cues, which then operate as a common denominator to a shared system of equivalence. In simpler terms, these shared beliefs are meaningful to the population as they induce social consistency. This constancy is achieved if the argumentations withstand oppositions and are able to remain congruous from one situation to another (Livian/Herreros, 1994). Shared meaning can be perceived as a co-construction of the involved parties, where the *collective* participation of establishing a common order of reference and subsequent values hierarchy leads to the development of *individual* preferences. Over time, a bond prevails between values established during the construction process of arguments, and values in the ensuing communication results. This processual continuation can

therefore be assimilated to a path dependency phenomenon, where different value construction processes lead to different results. Summarily, the formation of value systems is dependent on their contexts. As individuals are capable of discerning the main features of issues or situations they find themselves in, they are able to switch their argumentative pattern to another as well. In this extent, the process of justification may also comprise strategic purposes. Actors therefore deliberately mobilise one or another register of arguments according to the conventional belief system of the recipients they intend to convince (Godard, 2004).

3.1.3.2 *State of worthiness*

Understanding how settlement between individuals adhering to different logics are achieved in various situations is one of the core interests in the economics of worth, an approach developed by Boltanski and Thévenot (Livian/Herreros, 1994). The authors defined six different 'worlds' or 'states of worthiness' that are manifested through patterns of justification: the inspired world, the domestic world, the world of fame, the civic world, the market world and the industrial world. A summary of these six worlds' characteristics is available in the annexe and concrete examples corresponding with the subject of research of this paper will be highlighted in greater detail in the penultimate section of this chapter. Each 'world' constitutes a set of consistent and structured principles, orders of justification that are inherently coherent within its own world (Godard, 2004). In other terms, they are ideal types of rationale with which one can recognise and analyse the essence of given situations. Each world includes a 'highest common principle' on the core of the justification which ensures coordination and allows people answering to the world's logic to agree between each other. This highest common principle generally represents a state of worthiness recognised within the world. Although this state of worthiness may be positively connoted in other worlds, the same notion which may be considered as 'worthy' in one world may be on the contrary perceived as unbecoming in another world, thus rather representing a state of deficiency (Livian, Herreros, 1994). Thus, the logical reasoning of some actors may at the same time be put in use as a source of criticism of the core values of this same reasoning. Therefore, there is no transcendent instance of worth, no unifying state of worthiness that encompasses every order of justification as the highest common principle of highest common principles. Moreover, a state of worthiness is not obtained without fulfilling a specific endeavour. In order to prove the worthiness of an idea, it is put through a model test, which verifies through a set of objective comparisons whether the idea answers to norms that are deemed worthy in the world of reference (Godard, 2004).

3.1.3.3 *Agreement, Settlement and Compromise*

The scope of the economics of worth is to seek a common understanding within a rather pluralistic landscape of justifications and opinions that cannot fully achieve agreement among all existing viewpoints. Besides providing a reading grid that facilitates the analysis of justification discourses by allocating them into the six different worlds of worthiness, this approach also proposes three scenarios depicting the various relationships within and between these worlds depending on the situation they are confronted with as well as means of solving disagreements. First, a discord within the same world may arguably be the easiest occurrence to settle by way of undertaking a model test which will ultimately bring each side back to the same logic

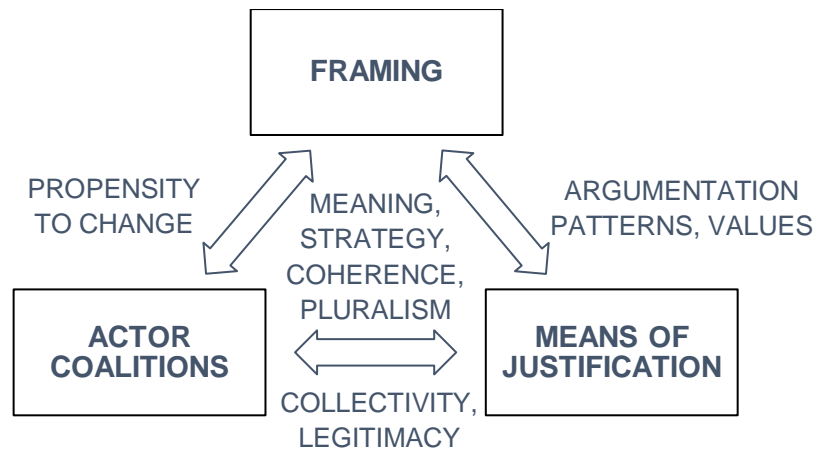
pattern. As each order of justification can rely upon the same highest common principle, conflict is subsequently brought to an end. The second possible scenario is the opposite of the first, that is no discord within different worlds. Although collusion is reached between two different worlds, this harmony is only temporary as actors do not agree on a common principle but accept a settlement, a temporary satisfaction over the issue. However, the situation can escalate over the course of the execution of a model test, as in contrast to the first case scenario, an agreement cannot be established using the same logic and each party will recoil to their world's common principles. Consequently, enters the third and most frequent case, namely controversy between worlds. Three solutions come into consideration. One of them is to achieve clarification in one world, meaning that each party accepts the supremacy of one of the worlds in conflict, thereby discarding the inferior world. Another possibility is to go back to the second case scenario, a temporary state of settlement. Last but not most sustainable way to find mutual understanding between two worlds is the compromise. Here, instead of agreeing to disagree and relinquishing any longer-lasting accord as it is the case for settlements, actors forge an agreement by connecting elements together that belong to each world involved, thus creating transcendent means of references. Compromise may occur either by way of providing a new significance to prevailing principles, 'stretching' the sense of an issue to a common understanding. Otherwise, consensus may be achieved if an additional world to those in conflict is apprehended in the justification process and this 'third-party' world is commonly accepted as dominant in comparison to the worlds in conflict with each other. In other terms, two confronting logics are merged into a third one as a common 'world' of reference' approved of by both conflicted worlds (Livian/Herreros, 1994). "It is important to note that field settlement around an issue does not imply definitive resolution. Field actors may come to collective agreement about what can and should be done in response to an issue, but this does not mean that stakeholders in larger society (governments, activists) will consider the issue resolved. Thus, issues considered settled by actors within the field may once again become the subject of intense debate" (Litrico/David, 2017). As common ground can be found by crossing different worlds of worthiness, some points of convergence are also apparent between the three theories introduced in this chapter.

3.1.4 Bringing Concepts Together

Despite their diverse range and interdisciplinary theoretic origins – which combines principles from communication science and organisation management embedded in sociology, the three approaches are quite complementary to each other and merge into one another to some extent. Thus, it can be viewed both as an integrated as well as an integrative research framework. The figure below presents an attempt to create an overviewing appreciation of the linkage between the three approaches, each one potentially extending the conceptual reach of the other two. In other words, each individual system feature is greater than the sum of its components. Together, the concepts can be perceived as a systemic approach including actors, objects, systems and contexts to the analysis as well as bridging micro and macro viewpoints and processes by providing means of "understanding of how actor-level framing can lead to field-level conventions" (Litrico/David, 2017). In doing so, these principles join the tradition of ethnomethodology and symbolic interactionism methodology (Widmer, 1997; Cloutier/Langley,

2013). Moreover, there is no distinct boundary to the added surrounding notions as they themselves might even intersect with each other. However, the core concepts that underlay into each previously discussed theory are above all meaning, coherence and pluralism. For the sake of simplicity and in order to maintain a coherence with the other two conceptual approaches, we will usually refer to organisational fields as social groups or groups of actors.

FIGURE 2: A CONNEXION BETWEEN NEO-INSTITUTIONALISM, FRAMING AND JUSTIFICATION THEORY.



All three theories allocate great importance to the notion of sense-making and common understanding among actors. The neo-institutionalist approach invokes a socially constructed and normalised collective rationality in co-dependence with institutional prescriptions. The principle is inherently shared with the framing approach, which mobilises and cultivates standardised yet evolving patterns of recurring elements that simplify the interpretation of an issue (Hoffman/Ventresca, 2002). The justification theory adds up to the significance of this notion by establishing common principles of justification as the foundations of an agreement. The three theories not only revolve around means of collective understanding of an issue but connect on other related themes and points of interest. As no assigned meaning is made without purpose, strategy and change of meaning over time also hold a role among these three approaches. In the case of strategy, states of worthiness, as well as frames, can be employed intentionally in accordance to the recipients and aims of the message. On another level, organisations strategically comply with the conventional drive for isomorphism pressured by institutions or deliberately choose to do their own. Concerning the change of meaning, as the interpretation of an issue may evolve over time, it may consecutively lead to a change of behaviour. Thus, means of justifications and actor coalitions can be combined as framing trajectories may be able to affect action depending on the outcoming settlement. Consequently, a conflict resolution can be accomplished when actors acknowledge the new signification of an issue and change their behaviour as they integrate this new meaning into their operations (Litrico/David, 2017).

Likewise, coherence might also represent a common matter of preoccupation. In a macro perspective, neo-institutionalism implicitly comprises an understanding of constancy and durability of organisations. Actors usually have a unique and coherent function of preferences or objectives that explain their behaviour in a unifying manner in the different contexts in which they operate. There is a relationship of codetermination between actors, objects and the structural

context they are settled in (Godard, 2004). In a micro point of view corresponding to both frames and the justification theory, consistency is achieved when several statements are congruent to logical reasoning. Consequently, a link or a connexion between the various elements that constitute an uttering has to be built in order to assess the presence of coherence within the statements. This connexion occurs when confirmed reference points are collectively understood as relevant. In other words, common norms and values shape the prevalence of consistency (Kohring/Potthoff, 2014; Smith, 2019). For the economics of worth, maintaining coherence within the world of reference is a given. Even in cases when two actors who relate to the same world disagree, the coherence is consistently re-established with the highest common principles. Furthermore, it is through identity congruence that actor coalitions can be externally recognised as legitimate, thus being more propense to dominate other orders of justification in case of conflicts (Leifeld/Haunss, 2012). Indeed, the integrity of argument operates in a virtuous cycle, as consistent discourse provides legitimacy to actors, which in turn grants them social recognition and consideration (Hasse, 2012). Sources of statement legitimacy can be split into three groups: authorities, experts and affected parties (Widmer, 1997).

Neo-institutionalism, worthiness and framing can also be linked to each other via their different takes on pluralism. There are multiple institutional logics to which organisational fields maintain a co-dependent relationship with as they provide meaning and order to society. There is therefore always a prospect for conflicts between competing reasonings, some of which have empirically shown to reshape social practices (Lounsbury/Zhao, 2014). Framing embraces pluralism as it leaves open the possibility to determine a frame in accordance with any possible situation one seeks to analyse by using this specific theoretical framework (Kohring/Potthoff, 2014). Whereas the overwhelming principle of framings is its potent methodological versatility and cultural flexibility, the economics of worth adds up to this understanding by providing a steady structure that can be applied in any given situation as it recognises the fundamental coexistence of multiple orders of justification. Worthiness “enhances understanding of how objects contribute to establishing coordination processes when multiple principles of action coexist within a single organisation” (Daudigeos/Valiorgue, 2018). Each approach agrees to confront plurality as a basic fact of reality to study, and acknowledges an overall diversity of logics that does not derogate to a unifying principle once actors adopt a notion of shared understanding. Taking a plurality of orders and opinions into consideration leads to more impartiality in scientific research (Godard, 2004).

3.2 CURRENT STATE OF RESEARCH ON ENVIRONMENTAL DISCOURSES

In our literature research, we have not encountered any scholarly reference that directly covers the subject of energy transition while at the same time relating to the theoretical principles presented above. Therefore, some of the articles presented below may deal more broadly with sustainability and environmental issues instead of the energy transition.

3.2.1 The Worthiness in Nature

Lafaye and Thévenot (1993) followed by Godard (2004) have attempted to apply the justification framework to the topics of common goods and natural heritage. Whilst not referencing

each other, both studies put the six worlds of reference into use by ascribing environmental values to the given logical patterns, and discuss whether or not the environment should constitute a seventh world.

3.2.1.1 Applying worlds of worthiness to sustainability

The domestic world is characterised by its respect and attachment toward territory and history. Therefore, in the context of sustainability discourses, a major concern is to maintain a legacy throughout generations (Godard, 2004) and particular attention is given to entrenched communities, local customs and quality of life (Lafaye/Thévenot, 1993). This affinity towards the reassuring comfort and enduring trust of local customs and heritage might lead to hostility towards the unfamiliar and the unexpected, thus fostering resistance to change (Godard, 2004). This state of deficiency stands in stark contrast to the world of inspiration which precisely embraces the unusual, displaying curiosity towards new ideas and eagerness to change. Translated to the environment, inspired worthiness is also attributed to the beauty of nature and the emotional link towards it. As it takes hold on the symbolic meanings of its surroundings, subsists an “intimate and ineffable relationship between human and nature”, a peculiar emotion reliable to everyone when contemplating a landscape (Lafaye/Thévenot, 1993). This notion can be extended to religious meaning, an appreciation for the divine creation, the perfection of nature surpassing any human ability. This state is however chastised by both the industrial and civic world for being dogmatist in the former and elitist in the latter world (Godard, 2004). Again, reinforced by the civic world through legislation measures, inspired aestheticism is also understood as refraining from operating landscape alterations. Hence, discourses adopting inspired justification traits manifest a sense of nefariousness towards installations that might jeopardise nature (Lafaye/Thévenot, 1993). In this spirit, as the world of inspiration embodies the notions of personal commitment and sacrifice, changes one might be willing to take are self-empowering, accepting to alter their behaviour in lieu of altering the environment.

The world of fame is driven by high-profile personalities and overall notoriety. Sustainability is therefore only perceived as worthy as long as it gets covered by the media and shapes the public opinion. Environmental issues are newsworthy in particular when they are subjects of controversy between different prominent actors, or a cause of dismay induced by the risks or concrete event of natural disasters and man-made catastrophes (Godard, 2004). Moreover, media resonance is mostly achieved for instance through the promotion of sustainable practices by celebrities or notorious spokespeople, as these actors are more likely to grant visibility, legitimacy and adherence. Nevertheless, as honourable these medialised awareness-raising measures might be, a possible backlash is imminent as publicity might come out as deceiving or dishonest when the embodied concern is not associated with proper and meaningful acts (Lafaye/Thévenot, 1993). This matter of critic can be associated to the righteous, law-abiding and communal principles governing the civic world. Indeed, in the context of the environment, worthiness is attributed according to how well nature is managed in the service of public interest (Godard, 2004). Thus, this world is mostly appropriated by politicians and NGOs mobilising principles of equity and solidarity of humans in regard to nature. However, as legislative texts and public institutions are highly regarded in this sense, the civic world might be chastised due

to the slowness of administration and unsuitableness of the judicial language to environmental issues (Lafaye/Thévenot, 1993).

In the price-related market world, nature is perceived as a marketable commodity, a source of goods and direct trade. This world aims to put a price on primary resources and ecosystem services and worthiness is attributed to resources with the most value (Godard, 2004). This perspective might be useful to some agents as it offers a measure of equivalency between different commodities through their market price, thus permitting a comparison between other goods. As it consecutively may give the incentive to prioritise one good over another, the legitimacy of this logic might be questioned when the comparison is carried out between unrelated assets, the risk being that a sustainable good might value less than an unsustainable one. Indeed, there is an intrinsic incompatibility of value measurement between the short-term economic logic and the longstanding temporality of natural processes (Lafaye/Thévenot, 1993). A similar issue is encountered in the case of the industrial world. This world of reference is shaped by the principles of science, modernity and progress. Environmental concerns are thusly internalised in a technological line of reasoning and assimilated to any other technical constraints like criteria of efficiency, costs and performance. Even though they are not equal, these constraints might be assessed as if they have the same significance, therefore potentially misevaluating the worth of each individual criterion (Lafaye/Thévenot, 1993). Furthermore, the worthiness of natural resources is estimated depending on how fit they are for human exploitation, be it as a source of workforce or as raw material goods ready to be processed and transformed. Thus, the state of worthiness of nature is on the one hand its functionality, but on the other hand also its foreseeability, as an unruly, unpredictable and endangering nature represents a state of deficiency (Godard, 2004).

3.2.1.2 Environment as a state of worthiness

Following the observation that it is possible for each world of reference to embed environmental rationale to some extent, the likelihood of sustainability itself being conceived as a new state of worthiness has also been contemplated. However, three incompatible features hinder the justification framework to fully enclose environmental and sustainable discourse as a world of reference: temporality, accessibility and plurality. Sustainable discourse is future-oriented and concerns not only future human generations, but also all living beings and their environment. As the scope of the justification approach is to reach an agreement between human subjects at this juncture of history, neither future nor non-human entities are able to speak for themselves, resulting to an asymmetry of argumentation that cannot be settled through model tests (Lafaye/Thévenot, 1993). In addition, there are too many divergent and competing points of views that coexist within the overarching understanding of environmental issues. Consequently, none of the various orders of references can outweigh another in terms of power (Godard, 2004). On a second step, consensus might be achieved over an idea, but disagreement might occur again when it comes to concretely execute that idea (Droz et al., 2013).

3.2.2 Fields and Frames under the Prism of Energy Transition

3.2.2.1 *The Dilemma of Pluralism and the Quest for Coherence*

The plurality of unsettled arguments around environmental concerns may make it difficult for actors to construct coherent frames. And indubitably, the plurality of visions and opinions around energy transition might create a barrier to action. In the nuclear debate for instance, the argument of safety is employed both positively and negatively by qualified spokespeople. Consecutively, this lack of consistency may lead to a distrust of the public towards experts. Despite their shared goal of security, different understandings between actors render that goal worthless and empty (Blumer *et al.*, 2015). For strategical purposes, actors may use the ambivalence of logics to their advantage and rather resort to frames which combine opposed categories instead of relying solely on definitive statements (Litrico/David, 2017), thus securing more range and flexibility as well as an appearance of neutrality and therefore validity by displaying 'both sides' of an argument. This concept might prove difficult to put into practice as the message has to remain coherent. Inspecting the disparate levels of acceptance over energy transition policies, Ziegler (2019) points out that the rejection of energy transition among liberal-conservative affiliations is linked to its framing as an ecological policy. Therefore, rather than shifting the discourse toward conservative-liberal values, which may prove controversial in particular regarding the issues of nuclear phase-out and the necessary investments to expand renewable energies, the author suggests employing frames that are more neutral in order to obtain a better reception on the part of these political affiliations. Addressing general environmental values and the general conservation of the environment might appeal to a wider and more diverse audience while keeping coherence in the overall message (Ziegler, 2019).

3.2.2.2 *Environmentally Related Actors and Their Argumentation*

The variety of opinions is linked to the multitude of actors involved around the issue in. There are different comprehensions of how categories of actors can be brought together into actor coalitions. They are most commonly defined according to their fields of affiliation. For instance, Lafaye and Thévenot (1993) describe three types of prevailing territorial actors in the context of sustainability. They include governmental actors in the form of an administrative body or public institution, associative actors like NGOs and regional associations that build up communities and criticise or encourage upcoming projects, and finally political actors as local politicians that follow specific agendas and take account of the interests of lobbies. Similarly, Schumacher *et al.* (2019) define the socio-political, the community and the market dimension as the three social dimensions in which different stakeholders interact and attempt to influence public acceptance of renewable energies. Not only do inclinations and values differ between actors, but also their level of involvement. In the case of energy policy for instance, the discourse is polarised by communal executives whereas the population is moderately interested in this political area (Liesch/Stadelmann, 2018). Therefore, coalitions can be resolved according to the levels of proximity actors entertain to an issue. In this effect, Litrico and David (2017) discern three ranges they refer to as 'frontstage', 'middle-stage' and 'backstage' depending on the extent by which actors are linked to an issue as they are figuratively under the spotlight and thus exposed to public pressure. Similarly, Rothe (2014) defines a core discourse coalition

defending the interest of energy transition and constituted by idealistic scientists, single politicians and smaller solar businesses, which, over time, is expanded with bureaucrats and officials, major businesses, NGOs and scientific think tanks. Oddly enough, from all the reviewed studies, only this last author takes account of the scientific agents that, while they may represent a minority in public discourse, are still concerned and have legitimacy in regard to energy issues in a variety of disciplines such as engineering, economics, law, social sciences and overall forecasting.

Accordingly, the diversity of actors employs different types of discourses. Lafaye and Thévenot (1993) identify several argumentation patterns for both associative and administrative actors. In the former case, experts base their discourse on scientific evaluation, while activists and critics mainly contest the industrial and technocratic rationale and negate the unconditional pursuit of progress. At the intersection between association and administration, 'managerial ecologists' seek to enforce the laws and follow decision processes. As for administrative actors, their discourses depend more on their status than their values. In this effect, the management makes use of a regulatory language, whereas engineers employ technical language. Generally, administrative actors tend to respond favourably to justifications referring to cost efficiency (Lafaye/Thévenot, 1993). Liesch and Stadelmann (2018) dig deeper into politics and discern three types of strategies in regard to energy policy, promoting sustainable energy sources, efficient energy supply as well as communications on the matter. In regard to organisational argumentation, Hoffman and Ventresca (2002) note two main categories of frames through which pressures for environmental protection are expressed. On the one hand, environmental issues can be portrayed as a choice before being an obligation, as corporations are not expected to protect the environment "unless the government forces them or activists shame them". On the other hand, these issues can be framed as an opportunity reflecting the core objectives of the coalition (Hoffman/Ventresca, 2002).

An additional approach that facilitates the categorisation of the profusion of arguments and frames is to observe the different spatial levels of magnitude surrounding the issue. Lafaye and Thévenot (1993) establish different scales by which discourses relative to common resources are addressed in political discourse. The smallest entity views common goods as an aggregation of private goods, referring to values of quality of life and natural heritage and mainly relating to the interests of local citizens. Translated to the worlds of worthiness, this scale is therefore strongly relying on the domestic world. Contextualising common resources to a higher level of magnitude, on the other hand, draws on orders of justification from the industrial world. Indeed, the extension of this notion into wider settings involves technoscientific argumentation patterns that make use of measured and prospected estimations of future stakes. The discourse over the scarcity of resources reveals general consequences not only in a spatial dimension, but also in a temporal one. However, by adding both global and future-oriented images to the discourse, the understanding of the issue gets more abstract and inconceivable. To get the message across in a more effective manner, this wide and complex view is combined with the small concrete conception of the issue. This strategy of small-scaled exemplification of a global issue ultimately legitimises political actors in their endeavour to implement big-scaled projects (ibid.).

3.2.2.3 *Contextually Diversified Institutional Change*

The neo-institutionalist approach also asserts that disruptive events drive shifts in actor coalitions – thereby inducing social change – and that unfolding processes are strongly dependent on the initial situation it is set in. Empirically, the diverse outcomes following the nuclear disaster of Fukushima were explored by Aykut and Evrard (2017) over the course of a comparison between two neighbouring countries: France and Germany. In these cases, the shift appeared respectively during two different contexts. Germany took hold of the issue since the 1980s, whereas France raised the question only since 2011. Although these two countries have the common feature of having started addressing concern toward their current infrastructures as two crisis of energy systems occurred, two different and distinct narratives prevailed in both France and Germany. To some extent, this diversity eventually implied some narration traits of one country to contradict story elements of the other country. In this respect, while observing any institutional change in a given society, one has to take account of both the spatial and temporal components that constitute a potentially change-inducing context. In other words, emphasis ought to be made both on the specific cultural and historical setting, as well as on the timing in which the discourse around energy transition started to emerge (ibid.).

The different temporalities between these two countries comprise different processes. The authors speak of a ‘domesticated transition’ in Germany where the resolve to change the energy system arose from the bottom-up. The country experienced a case of appropriation and of aggregation by political and administrative actors of a concern that initially emerged in the scientific spheres. The coalition who created the transition movement progressively became institutionalised, its novel ideas being retaken and reshaped by the government. This course of events falls in line with the MLP, in which niche actors acquire little by little legitimacy in higher instances until they become the norm. By contrast, France witnessed an ‘orchestrated’ or ‘choreographed transition’ that spread from the top-down. In this case, the notion of energy transition became a political tool justifying the prolongation of current energy politics, with the objective of keeping the legitimacy of dominant actors (Aykut/Evrard, 2017). Besides sharing energy crises as the decisive turning points to act upon them, both countries share another important common trait. Indeed, both France and Germany maintain continuity in their respective national policies. Thus, the appearance of the energy transition in the political agenda does not question the economic and industrial model of each country. In this spirit, Germany’s policies do not impede on the automotive sector and France keeps cultivating its nuclear-based and centralised economy. The authors conclude their analysis with the realisation that the rhetoric construction on energy transition does not necessarily overlap key processes of political change and also consists of reinventing oneself in order to stay the same at the end (ibid.). If there is any silver lining in these observations, it is that both governments may have taken a more reasonable and rational path of maintaining a status quo while attempting to alter the order on a minor scale. Indeed, taking another maybe less compromising and more disruptive route would have been otherwise either too unreliable, unpopular, or unrealistic to implement for decision-makers. Furthermore, this way of conduct corroborates the incremental changes outlined in the MLP introduced over the course of the last chapter.

4 RESEARCH PLAN

Extensive knowledge on the challenges of discursive shifts and energy transition has been acquired over the last two chapters. Hereinafter, the numerous theoretical approaches apprehended beforehand serve as a conceptual framework guiding our empirical endeavour for the completion of this research. On that account, this chapter comprehends the methodology of this study. Starting with the exposition of the research questions and hypotheses, it is followed by its procedural rationale and ends with a description of the effectively employed empirical process.

4.1 RESEARCH PURPOSE

Following what has been established so far in our literature review, the ensuing step of this study is to justify our research purpose. Hitherto, we have seen how intricated the issue over energy transition might be even in a detached point of view and that the multitude of concerns may alter over time. These alterations are in turn reflected by argumentative trends we intend to observe. In other terms, our research investigates the evolution in the depiction of the challenges related to energy transition by monitoring the various frames and justification patterns emitted on that regard. Based on this assertion, we develop the research question and a few corresponding hypotheses.

4.1.1 Research Question

The main objective of this study is to discover how collective rationality on a multi-layered issue is constructed despite the plurality of opinions. Therefore, we aim to survey if a discursive change in the manner of representing energy transition has occurred over the last few decades. On that account, it is necessary to conduct a long-term and retrospective study on the argumentative developments of energy transition. Corresponding to the discursive attribute of this subject of study, a content analysis is the most appropriate method to conduct this empirical research. Accordingly, the research material fit for an unaltered depiction of discourse over a longer period of time is found in media archives. An explanation of this material of choice will be provided in the next section of this chapter. In addition to our intent of uncovering an evolution in the depiction of the energy transition, we also aim to detect patterns of alterations both in terms of actors and statements during that time period. As Chateauraynaud (2011) argues, bifurcations and tipping points as well as the scope of diversified expressed reasonings can be highlighted through argumentative trajectories. This leads to a more acute comprehension of the socioeconomic climate on which opinions depend on, providing an overview of the contemporary attitude of groups of actors towards the energy debate. Ensuing from these premises, we formulate the research question as follows:

How were the meanings, argumentations and institutional decisions linked to the energy transition before, during and after Fukushima?

4.1.2 Hypotheses and Probing Questions

Based on this research question and the insights gained by the few studies presented above, we propose several hypotheses, each linked to one of the three conceptual approaches introduced in chapter 3. First, we assume that isomorphism will ensue over time, meaning that the mindset of initially heterogenic groups of actors will progressively evolve in the same direction. Given the related logical reasoning as well as the geographical proximity to France and Germany, attitude changes in Switzerland might have appeared in a similar fashion to those of its neighbouring countries. One might expect similar results to those two nations, but as this development is neither universal nor fixed from the outset but occurs contextually, we do not have a distinct presumption as of the precise nature of this development as of now. In this respect, we ask ourselves whether Swiss actor groups follow an institutionally induced change of perception, or witness a mindset disruption from the bottom-up akin to the realisation of the MLP, or alternatively complete yet another discursive trajectory based on their argumentation.

Second, we presuppose that the various manners to represent energy transition diminish with time and tend towards fewer and more coherent frames. This assumption follows again the isomorphic logic on the content level and is on par with the conventionalisation and naturalisation process of framings. Standing for the application of specific interpretations in the public discourse (Raupp/Völker, 2014), frames are constructed and altered through time. As these frames are not yet established in the first phases of argumentative appropriation of issues, their relevance and congruence are tested by trial and error until only the most coherent frames linger on. Moreover, we believe that reversals of majority opinions according to the current political climate will occur at some crucial points of the discourse evolution. Referring ourselves on key events and hot topics taking place in Switzerland over the past decade, we noticed that there was approximately a four-year shift between conservative and progressive predominance associated with contemporaneous political issues like healthcare or immigration politics. Roughly schematised, liberal-conservative politicians prevailed between 2008-2011 whereas progressive officials took over between 2011 and 2015. Thereafter, conservatives were in the lead between 2015 and 2019, after which the recent 'green wave' caused yet another dynamic shift in political ranks by September 2019. According to this duality, we suspect a turn-over of prevailing argumentation patterns ultimately reflected by parliamentary election results.

Last and in accordance with the depictions of worthiness browsed in the previous chapter, we consider that the discourse will be mostly represented through the industrial world. Indeed, the industrial justification conceptualised by Boltanski and Thévenot values future-oriented mindsets, scientific and technological performances as well as the generation and promotion of knowledge, three relevant rationales in relation to the discourse around the energy transition. Thus, the usage of such a flexible framework is more plausible than any other worlds of worthiness in the context of this research. Furthermore, we expect that the market and civic worlds will appear in the sample in approximately equal measure. The values they stand for are conventionally represented in the economic and political spheres and both are decisive discourse arenas in matter of energy transition. The inspired and domestic worlds are ambivalent, as

they respectively reflect spirited or traditional virtues that are relevant, but simultaneously remote from a regular position statement in Swiss media in relation to the research subject. Having preconceived assumptions over the interests and concerns of the communities that are affected by energy-related questions, we suppose that the world of fame will be the least employed order of references in this regard. As values of fame are related to celebrity, prestige and overall popularity, we believe that these attributes of worth are to some extent unrelated to the conundrums of energy transition. In contrast to the two previously cited conceptual approaches of framings and organisational fields, the justification theory postulates that efficient worlds of worthiness prevail with time. Therefore, we do not expect any deviations over time to the predicament of the industrial values being the most referred order of references. However, we envisage alterations in the dynamics over which other worlds of worthiness are less or more utilised over different periods of time.

4.2 LOGIC OF RESEARCH DESIGN

This section describes in which manner the literature review will be put into empirical use and what type of research will be conducted in order to confirm or infirm the previously established research question and hypotheses. Thereafter, a series of choices made to determine the research material will be exposed, with subsequent processual decisions in order to keep a reasonably solid and narrow base of material to analyse. Among this selection, an outline of an appropriate and definite timeframe and a spatial delimitation of the research material will be defined.

4.2.1 Application of the Theory

The theoretical approaches introduced in the previous chapters were not only chosen in order to fit the subject of research; they were also selected in order to suit with the research method as well as the before mentioned research question. The comparatively large amount of theory approaches presented over the two previous chapters will be employed in two different manners. On the one hand, chapter 2 gave insights into the research problem of the energy transition through a national historical, sociological and economic point of view, thus offering a framework by which recontextualise the research findings on an upper level after the analysis. Chapter 3 on the other hand, allowed the constitution of a theoretical framework which is aimed to directly confront the research material. The section about organisational fields provides the setting on primarily identifying actors who side together through their value models and justification patterns, upon which to monitor the changes in the dynamics between these coalitions over time. Thereafter, we should hold enough material to complete these actor trajectories by highlighting the dynamics within institutional prescriptions. On the condition that the previously established hypotheses are confirmed, the ensuing findings should provide the groundwork to outline an isomorphic cartography. The framing approach acts as the foundation to identify the actor coalitions through the different manners energy transition is framed through time, as both authorial intent and situation ascertain the way frames are (re-)constructed. In order to do so, a systematic method of grasping the diversity of frames has yet to be defined. In similar fashion and as a complementary approach, identifying the controversies and settlement of opposing

coalitions as well as argumentation patterns in all their diversity might be facilitated by the evaluation grid provided by the justification theory with its typology of worlds of worthiness. As priority is given to the discourse of actors, only the expression and wording of their justification and not their concrete action is empirically conclusive (Livian/Herreros, 1994). Hence, studies using this framework are generally bound to be descriptive and so will it be for this research.

The objective is not to investigate specific political initiatives linked to the energy transition, but in which specific context energy transition is addressed and in what way it is portrayed. In order to complete the various argumentation logics with frames with the abilities of actors to build and influence these frames, it is reasonable to adopt a systemic approach on the subject (Lafaye/Thévenot, 1993). In other words, the research question is developed by taking multi-dimensional aspects into account with respect to actors, their discourse and the spatiotemporal context in which these utterings have been asserted. Therefore, the descriptive analysis operated in this study is qualitative by essence and lies in-between the discourse analysis and the social network analysis within a specific time and territorial range. This study is qualitative and inductive, where unprecedented significant observations found during the empirical research might be included in the research findings and may even generate new research questions (Dudovskiy, 2018).

The evolution of meaning systems can either be explored ethnographically by observing interactions between actors or historically by analysing and measuring field-level assertions present in archived documents (Lounsbury/Zhao, 2014). In the case of this study, we opted for written media as a primary source of documentation for its opinion-forming functions and community-building attributes. Indeed, the media bestows visibility upon the actors they select for testimony, thus legitimising the behaviours and values of the speakers as they are voiced out and distributed toward a diversity of interested readers. “Published texts are valuable resources for researchers trying to retrospectively study evolution in social systems. Texts are constitutive elements of the social and cultural reality in which organizational actors are embedded, and therefore they are well suited for use in studying issue interpretation and framing” (Litrico/David, 2017). Furthermore, periodic publications in written form are more convenient to come back to than their audio or audio-visual counterparts and are easily accessible through online news websites or data platforms.

4.2.2 Operationalisation

In order to get access to Swiss press articles in an exhaustive manner, a preliminary keyword research within a delimited timeframe was conducted on the Factiva database, a platform that gathers and provides international news articles (Dow Jones Factiva, 2019). We employed the German word for energy transition “*Energiewende*” as primary word of reference due to our intend on tackling our research question on a nationwide scale and German being the most common of the four official Swiss languages. This first exploration provided insights into the availability of a well-sized sample regarding the selected timeframe and the eligible newspapers. As much as we are aware that newspapers are not the only media citizens consume in order to inform themselves and build their personal opinion upon, we heed that a sole particular keyword does not account for all energy future-related debates occurring in newspapers, and

that the debates and controversies encountered in the analysis process will in turn not necessarily be displayed in their full length in the final sample. This was yet the first succession of choices made in order to fulfil our qualitative analysis.

The media coverage was observed over the course of the first of January 2006 until the thirty-first of December 2019. This timeframe was chosen in order to capture potential discourse shifts after the nuclear disaster that happened in March 2011 in Fukushima. Indeed, as it was primarily assumed that this nuclear incident would represent a decisive pivot point in the depiction of the energy transition, it appeared relevant to select a timeframe that went several years prior to this event. We expected to obtain an adequate amount of information that enable an accurate comparison between the periods before and after the incident. Nevertheless, some adjustments had to be made regarding the choice of the newspaper. It was first intended to either analyse one major newspaper per each three Swiss language regions, or to compare two regional newspaper according to their locality and respective diverse energy-intensive attributes they are habituated with. For instance, we would have juxtaposed a lowland area operating nuclear facilities with an alpine region more propense for the exploitation of natural resources. However, in the first case, a potential comparison between three languages would have proven difficult as the comprehension of energy transition differs linguistically.ⁱⁱⁱ In addition, according to the keyword result, the sample would have been too abundant to analyse without proper external or computationally automatized assistance. Therefore, the analysis was limited to one newspaper only. We favoured regional newspapers in order to keep a consistent spatial range throughout the analysis and looked in addition for regions in which energy played a key socioeconomic role.

4.2.3 Regional Choice

The newspaper selected for our content analysis was the *Aargauer Zeitung*. This newspaper mostly assembles information on and about the Canton of Aargau and expands to its neighbouring regions of north-western Switzerland, thus narrowing the sample to a spatial setting. Published by AZ Medien, the *Aargauer Zeitung* (AZ) is not owned by multinational media companies and thus follows its own independent editorial policy (Puppis et al., 2017). This specific newspaper and therefore its regional range was chosen for several reasons for the scope of this study. First, the Canton of Aargau itself is a very diverse and energy-intensive region. The local economy relies heavily on the energy industry as the region is not only home to the three nuclear power plants Beznau 1, Beznau 2 and Leibstadt, but also holds 26 hydroelectric power stations, the solar-powered museum Umwelt Arena as well as many other renewable energy facilities. As it provides one-third of the national electricity supply, Aargau is often referred to as “the energy canton” (Kanton Aargau, 2019). The inhabitants of Aargau are therefore very concerned with national energy-related policy outcomes, especially in the aftermath of Fukushima’s nuclear disaster and the anti-nuclear movement that followed, as part of their economy would have been jeopardised. The popular interest may also be attested by the amount of internet research undertaken by the nation over the course of these last twelve years. Of all Swiss subregions, citizens of Aargau did the most Google inquiries on the topic of energy transition, as illustrated by a graph available in the annexe (Google Trends, 2019). In consequence, Aargau was the only canton outside of Central Switzerland to having declined the

popular vote on the Energy Act in 2017, which introduced the national nuclear phase-out (FCh, 2017). Indeed, the communes of Zurzibiet and Leibstadt hosting the local NPPs rejected the bill the most explicitly across Switzerland, with an 82 per cent opposition in Leibstadt (AZ, 22.05.2017). Therefore, the prospect of observing the conflict between anti-nuclear versus economy-driven discourses in a framework of highly affected pro-nuclear actors promised to be very singular and fascinating.

4.3 DESCRIPTION OF MEASUREMENT AND ANALYTICAL PROCEDURES

Following the intent to analyse the selected newspaper solely, a new “Energiewende” keyword research was conducted on the Factiva database with the additional filter of only displaying articles derived from the *Aargauer Zeitung*. This research output encompassed 559 articles automatically sorted by date of publication. A first reading of the 37 oldest articles reaching from the spring of 2006 to the end of the year 2010 was undertaken in order to familiarise ourselves with the material at hand and to establish an appropriate classification system for the analysis. Out of this sample test, we detected a dozen of articles that were not suitable for the analysis, as they only briefly mentioned energy transition without contextualising the keyword. Following this confrontation, these articles were dismissed from the analysis, reducing the pre-test to a sample of 26 articles. It was our initial intent to run the content analysis using the discourse-network-analysis freeware developed by Leifeld (2019). After getting acquainted with this digital instrument, we discovered that the DNA-tool did not allow revisions once data had been entered into the software and that it was not as automated as expected as relevant contents and actors had to be individually indicated as such. In addition, this tool designed in order to conduct quantitative measurements would have been unfit for a more subjective and contextual evaluation of frames or worlds of worthiness. Thus, we reconsidered our endeavour and decided to execute the empirical research manually in order to maintain a processual oversight on the data analysis.

4.3.1 Codebook Design

A codebook draft was elaborated based on the insights acquired from the literature review as well as the information available from the data research. This codebook is divided into four parts. The first section comprises technical data of the article, such as its date of publication, the number of words as well as an individual number of our own design intended to distinguish several articles published the same day. The second section includes additional formal criteria on the title, subtitle and authorship of the article. Entering the part of the effective content analysis, the third section is related to actors, their professional and political affiliation as well as their location. Finally, the fourth section is allocated to the statements of the previously assessed actors. This section incorporates a description string in which the newspaper article is copied and pasted from the Factiva files into the coding document. The inclusion of the justification theory was directly applicable in the codebook, where six columns were dedicated to the identification of a maximum of three states of worthiness and three states of deficiency within one statement. The positivity, negativity and ambivalence of statements were coded together with an overarching summary. These variables are displayed on the following table.

TABLE 1: FIRST CODEBOOK DRAFT FOR QUALITATIVE CONTENT ANALYSIS.

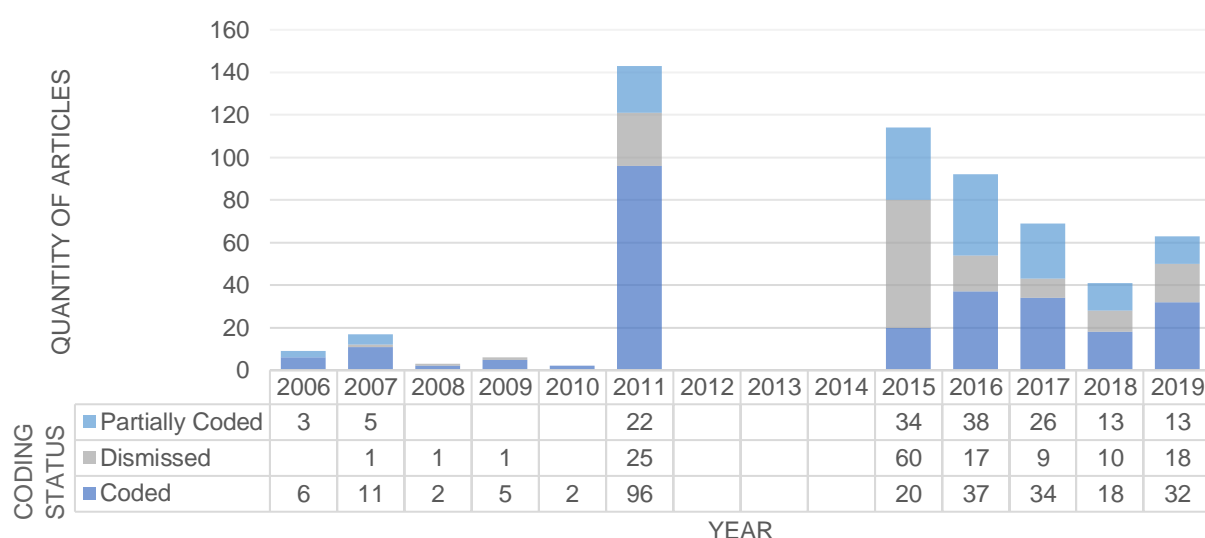
Category Content	Variable Description
<i>1. Technical Data: Article</i>	
1.1. Year	Published year.
1.2. Month	Published month.
1.3. Day	Published day.
1.4. ID	Unique eight-digit sequence number composed of the date and the number of the articles per day.
1.5. Display Format	Newspaper section/column (not explicit on Factiva files).
1.6. Length	Number of words.
<i>2. Formal Criteria: Authorship</i>	
2.1. Title	Title of the article.
2.2. Subtitle	Subtitle of the article.
2.3. Autor	Name of the article's author.
2.4. Affiliation	Profession and designation of the mentioned actor.
2.5. Location	City or commune the actor lives in.
<i>3. Content Coding: Actor</i>	
3.1. Name	Name of the mentioned actor.
3.2. Affiliation	Profession and designation of the mentioned actor.
3.3. Category	Social group the actor belongs to.
3.4. Location	City or commune the actor lives in.
3.5. Canton	Canton the mentioned actor lives in.
3.6. Party	Party the political actor belongs to.
3.7. Comment	Further observations.
<i>4. Content Coding: Frames</i>	
4.1. Description	Relevant fraction of the newspaper article to code.
4.2. Abridged	Summary of the statement in association with the keyword.
4.3. Worthiness	Identifiable worlds of justification with six fields available for coding: <ul style="list-style-type: none"> - Max. three states of worthiness. - Max. three states of deficiency.
4.4. Valence	Positive, negative or ambivalent statement.
4.5. Comment	Further observations.

Following the codebook definition, a second reading of the same 26 articles was conducted, this time coding noticeable content according to the variables of the customised codebook into an Excel spreadsheet. Some minor adjustments had to be made over the course of the coding. The mechanism behind the entry of newspaper articles only included the effective statements under quotation marks, which on the one hand reduced the number of potential actors and statements to register, and on the other hand left little space for contextualisation, thus diminishing the comprehension of the featured article once the items are re-evaluated for the analysis. This system, initially intended to save space on the coding document, was dismissed in favour of the full article caption into the spreadsheet. Thereafter, paragraphs instead of separated sentences most frequently constituted the rough delimitation between statements, a method which greatly facilitated the reading and inherent understanding of the arguments. Furthermore, the continuous coding of the valence was partially discontinued, as this variable has proven to be tedious and time-constraining to establish. In place of attributing a positive or negative value for every statement of an entire article, we only ascribed valence coding to statements that included the keyword. As there was usually only one mention of the keyword per article, this considerably reduced the workload.

4.3.2 Redefining the Sample

As previously noticed in the pre-test, some newspaper articles were unsuitable for the content analysis due to the absence of contextualisation of the keyword energy transition. Most frequently in these cases, the articles were interviews and profiles of political candidates, where the keyword was employed as an enumeration of current political issues by way of mentioning it in the same sentence as health insurance taxes or immigration politics for instance. These articles had to be removed from the analysis as no relevant interpretation could be drawn out of them for the scope of this research to the contrary of debate-related articles. Consequently, before reviewing each individual article consistently and thoroughly for the analysis, we briefly skimmed through the Factiva files to identify and assess the relevance of every keyword mention. Simultaneously, we held an inventory of each individual article's technical data on a separated spreadsheet, complemented with a coding status "to code", "partially", and "dismissed". Whereas the "to code" status is self-explanatory, the "dismissed" status refers to the before-mentioned articles that did not contextualise the keyword sought for our content analysis. The "partial" category mostly includes the readers' column, where answers to past articles and personal opinions on current affairs were published. They are labelled as "partial" as not the entirety of the article was significant for our study purposes. More than often however, several letters to the editor expressed concern on energy-related themes in the same issue. As these texts were rather short, we decided to include statements in the sample that did not include the sought keyword but were nonetheless covering topics connected to energy transition. Therefore, out of the 118 selected reader columns, 241 individual public statements were deemed appropriate for coding. Means of identification of these reader commentaries were held through the variable 1.5 listing the display format of articles. Operating with different coding statuses, 151 non-significant articles were excluded from the research. Out of the sample of 559 newspaper articles, 419 were analysed.^{iv} The summary of the sampled articles and coding status is displayed on the graph and adjunct data table below. A complete catalogue of each individual issue title, including their publication date and coding status is available in the annexe, together with a graph visually displaying monthly issue trends of the sampled articles.

FIGURE 3: YEARLY COUNT AND CODING STATUS OF SAMPLED NEWSPAPER ARTICLES.



The irregularity of publications highlights the polarised periods in which energy transition was more on the media agenda. Blatantly noticeable on this graph however is the lack of media coverage between 2012 until midsummer 2015. Possible explanations for this absence of content may be the corporate transformation experienced by the *Aargauer Zeitung* during this time period, or an input error emanating from the Factiva database. A comparative keyword research was executed on several other Alemannic newspapers and this shortfall never occurred in those cases.^v Considering that we proceeded chronologically without proofreading the repartition of keyword outcomes through time, the analysis was already in full swing when we detected this situation. Nevertheless, we decided to keep on using the abridged dataset as our main working material rather than opting for another newspaper halfway through the content analysis. Taking the three and a half years gap into consideration, we maintain that the findings will nonetheless remain representative in the context of this study. Apparent on the last graph of the annexe, the chasm between 2011 and 2015 is progressive, meaning that keyword occurrences slowly diminish in 2011 and gradually progress by mid-2015. This gap renders therefore a comparison between two periods, one prior to the incident until and during the incident on the one hand, and its aftermaths a few years later on the other hand.

4.3.3 Data Analysis Procedure Description

The analysis was operated in two steps. First, selected articles were transferred into the worksheet manually and divided into sets of statements according to their core message. For reasons mentioned above, paragraphs usually conveyed one set of argumentations, corresponding to a specific combination of worlds of worthiness and deficiencies. If two subsequent paragraphs contained the same combination, they were joint together and interpreted as one statement. Contrariwise, if we noticed that several sets of argumentations were present in one sole paragraph, the paragraph was split into several statement rows. At the beginning of coding, attention was given not to exceed the threshold of ten rows of statements per articles in an effort not to form too much of a sizeable coding sheet and reduce workload for further reading rounds afterwards. Exceptions to this coding rule were made in the occurrences of longer feature articles that extended a length of thousand words for instance. Technical and formal data such as the date of publication and authorship were registered during this coding phase.

Second, each article was individually read while simultaneously coding content information about the actors and their mobilised worlds of worthiness and deficiency. Our initial intention of summarising every statement was undermined as this endeavour would have been too time-consuming to execute. Instead, we brought out only statements that contained the keyword, which coincidentally has proven to offer a suitable overview of the representation of the notion of energy transition through time. In addition, conditional formatting was applied to the spreadsheet in order to create an immediately recognizable outline of the inscribed categories and thus gain rapid access to a sought article. Furthermore, in order to keep track with major events that occurred during the investigated timeframe and subsequently obtain an overview of this period, we conceived a table summarising the milestones and most significant developments published by the *Aargauer Zeitung*. This table is also available in the annexe.

*“All I say is by way of discourse, and not by way of advice.
I should not speak so boldly if it were my due to be believed.”
Montaigne*

5 DESCRIPTIVE RESULTS

Having completed the coding of the sample, this chapter explores the findings of the content analysis. They are accompanied by some noteworthy observations that may sometimes appear unrelated to the immediate answer to the research question of this study. These findings are nonetheless relevant for the complete data contextualisation and may raise meaningful new insights. The first part is dedicated to a broad description of outstanding trends without keeping track of a particular alteration over time. In the second part, we explore changing tendencies in the depiction or contextualisation of energy transition throughout the 14 years frame of the analysed sample. The third section of this chapter digs deeper into the background of noteworthy happenings and the manner in which these situations unfolded with time.

5.1 QUALITATIVE CONTENT PATTERNS

As no specific evolution is highlighted below, the observations depicted in this section may exude the impression of a certain timelessness of the debate. Some findings managed nonetheless to subvert previously asserted expectations. Despite this section being primarily dedicated to descriptive content, the multiple ways of interpreting sets of information and consecutively drawing conclusions put emphasis on how subjective the findings might appear.

5.1.1 Types of Actors and Actor Coalitions

Six types of actors were identified over the entirety of the sample. The most recurrent, and by implication most potentially influential actors in the matter of energy transition opinion-making process, were the political actors. They are comprised of electoral candidates, parliamentarians as well as local councils. As the party they belong to plays a major role in their values and by extension justification patterns, members of this social group are divided into subgroups according to their political affiliation. Corresponding to our instinctive belief of energy transition being portrayed as a comparatively polarised topic, the Social Democratic Party intervened in the about as much as the Liberal Party FDP correspondingly with 118 and 110 mentions. The Green Party GPS had about as much medialised interventions (92) than the Swiss People's Party SVP (91) and the Christian Democratic People's Party CVP (88). 'Younger' parties such as the Conservative Democratic Party BDP and the Green Liberal Party GLP were less present (respectively 28 and 19 times) and other small parties were mentioned 14 times. The intensified mediatised occupation of both the socialists and the liberals may demonstrate how the concern of energy transition is more embedded in a socially anchored and market-oriented discourse than on an environmental or reactionary one.

Far less present in the public discourse but ever solicited were the administrative actors represented by the Federal Council, Federal or Cantonal Departments and Comities. Also included into this group were national regulatory authorities such as the Swiss Federal Nuclear Inspectorate for instance, as well as independent expert groups constituted on behalf of the Confederation. As representatives of executive affairs, they stated the official position of the institution they belonged to and took an informative function on ongoing executive and legislative projects and procedures.

The opinion of industrial actors such as electric utility operators, engineers and entrepreneurs was summoned far less than expected, less than half as much as political actors. Some were spokesmen of their company, but most of them belonged to the higher end of the corporate hierarchy and were either CEOs, directors or managers. Their sentiments over energy transition-related issues were mixed and highly depended on the current political climate as well as their own political affiliation, as some of them were active members of political parties. Associative actors like NGOs and environmental or trade associations voiced out their opinion less frequently. among them, trade associations were the most active in uttering their concern. Hereby, a differentiation has to be introduced between 'conventional' corporate unions that shared common interests with the Liberals, and cleantech associations that were like-minded to the SP in particular. Not surprisingly, NGOs and citizen movements in favour of the development of renewables or the preservation of the environment shared values akin to those of left political parties with very few discrepancies.

Our prior intuition briefly alluded to in chapter 3.2.2 to add a scientific category among the relevant actor groups upheld our research as scientists and professors were sometimes solicited for their expertise in the subject. Most of them were professors in the Federal Universities of Technology, but in some instances, historians and political scientists were consulted. Finally, a few actors could not be assigned to any of these five categories due to their rare appearance and were consequently relegated to the all-purpose category "miscellaneous". This very small group included affected citizens and individual professions, such as lawyers, church guardians or event organisers. Due to their diversity, no specific attributes were identified in their regard. Some actors wore several hats; most of them were industrial actors who went into politics or inversely politicians that were appointed to a corporate counsel or an executive position in energy facilities. These dual roles and associated conflicts of interests they had the potential to produce were occasionally debated in the investigated newspaper.

There was no steady consensus between one social group, let alone between other groups. For instance, a representative of the notoriously anti-nuclear GPS expressed his pro-nuclear convictions, and a politician identifying with the risk-averse conservative coalition promoted the implementation of renewable energy power plants. Despite these few exceptions to the integrity of social fields, we will analyse discourses as if they were uttered by one sole coherent group of actors. Therefore, shifts in actor coalitions are not monitored in this research. Individual assertions that go against preestablished connotations add an additional layer of complexity to an already deeply convoluted issue, but are beneficial to the opinion-making process of the civil society as they undermine the illusion of an unconditional dualism between values of right and left parties. In addition, news articles that give account on current controversial issues were impartially written, depicting both sides of an argument and leaving the responsibility to

the reader to form his or her own opinion on the matter. This observation attests that the *Aargauer Zeitung* fulfils its function as a newspaper to display an extensive diversity of opinions and to relate information factually. However, in the particular case of seeking a settlement over the issue, an occasional newspaper reader may view neutral article conclusions as unsatisfactory features, as no effective and tangible action can be undertaken without any concrete settlement.

5.1.2 Means of justification

Over the 14 years sampled articles, many actors acknowledged the complexity of the topic as well as the difficulty of finding any settlement. As it has been established throughout the entirety of this study, the energy transition is a complex and multi-faceted issue with major unpredictable stakes. This topic has therefore been described through numerous lenses, tackling various themes and depicting opposed viewpoints.

5.1.2.1 Frequencies of Tackled Themes

Not unlike the dimensions revolving around energy transition defined by Frei (2018) and mentioned in the introduction of the literature review in chapter two, five recurrent themes were identified in the sample: Policies, economy, technology, society and environment. These five dimensions intersect each other through shared common subthemes. The overarching threads to all of them are the orientation to the future as well as the pursuit of the most suitable solutions. According to an analysis estimating the most recurring words in the totality of employed articles, especially social and environment-related terms appeared less frequently than terms connected to the three other dimensions. Our observation may lead to the understanding that 'energy transition' is not as much validated with societal concerns in the likes of well-being or protection of the landscape, as with quantifiable measurements such as reform-, cost- and energy-efficiency. This understanding may suggest that underlying subthemes of society and environment are more abstract and emotionally charged and therefore less rationally justifiable than immediately tangible numbers and percentages. Nevertheless, this does not mean to imply that social and environmentally linked topics were neglected or disapproved upon. Rather, this observation might also emanate from the language prerogative that more distinguishable keywords could be associated with the three economic, political and technological dimensions in comparison with the two other ones.

5.1.2.2 Worlds of Worthiness and Deficiencies

In accordance with these findings and formerly expressed assumptions, but independently from the five thematic dimensions, the industrial world was by far the most employed world of reference of the entirety of the sample. Again, the dominance of this world in relation to the five others may be due to the multiple contexts in which justification patterns embodying its core values are applied. The industrial world is not only attributed to all notions evaluating measures of performance, but also to argumentations present in a multitude of variables in association with energy transition in the likes of technology capacity and efficiency, energy

output, availability of resources, construction standards as well as percentages of cost increase or decline and other budgetary settings. This world of reference is also associated with any future-oriented and knowledge-seeking argumentation, of which a plethora arose in the context of energy transition such as the current state of research in the matter, the promotion of new technologies, methodical scientific expertise and overall clear expectations for the future. Accordingly, numerous were the occasions to which industrial logics were referred to.

The second most recurrent world of worthiness following close to the industrial world was the civic world, corresponding with the high profusion of political actors present in the discourse around energy transition. As the Confederation and regional councils vehemently tackled this issue through revised legislation projects and subvention programs, values held dear by the government such as regulations, collective commitment and rational action surfaced regularly in the analysed articles. These values were mostly identifiable in general discussions over the content of political reforms, but also core civil concepts in the likes of solidarity and freedom of choice were frequently mentioned. It is to be noted that political and administrative actors were not the sole social groups who appealed to such values, but every group of actors utilised the civic justification very frequently. Less recurring than expected with almost half as much mentions than the industrial world, argumentations categorizable to the market world of worthiness have the third-most frequent occurrence of the sample. Market justifications were manifested in the form of competition reconfiguration or job market and business opportunities that represented the economic challenge of the energy transition. Despite a less acute presence than political and executive actors in the sample, industry actors were indeed the segment which employed these values the most. Nevertheless, the political and governmental spheres regularly referred to such values too, and administrative actors unexpectedly resorted to them about as much, if not more, as civic orders of references.

The domestic world of worthiness, third-least recurrent in the analysed sample, appeared in argumentations touching upon energy transition as a responsibility and traditional matter. They regarded duty and security concerns – both security of energy supply as well as prevention from nuclear hazard –, cultural heritage and regional energy production customs. This value pattern was often brought in association with the civic and the inspired world. According to our expectations, fame-related argumentations were seldom utilised and represented the second-last frequent world of worthiness. They manifest through the record of mediatised promotional events, portraits articles and representation of actors as notorious personalities. As most of the dismissed articles of the newspaper sample were personality profiles, we assume that many of these dismissed articles would have included values of fame. Contrary to our hypothesis, the least solicited means of justification were from the inspired world. In association with the energy transition, mobilised values were of emotional nature, spontaneity and linked with nature and religion. Even more scarce, adventurous and risk-taking rationales were rarely present in the discourse, which may be problematic in the context of the technological progress expected to occur in order to achieve energy transition. However, this observation is not surprising given the discursive background of security concerns following the Japanese nuclear incident.

These were the registered states of worthiness. In terms of states of deficiency, which occurred half as frequently than positive value connotations, the classification of the most recurring

worlds is not the same. Civic states of deficiency were slightly more numerous than industrial ones, more insisting on or denouncing egoistical and individualism behaviour than on incapability and lack of performance. In the same vein, deficiencies of the inspired world were less scarce compared to the world of fame. More than often, a contrasting juxtaposition occurred between a state of deficiency and a state of worthiness within the same world. This dualism was usually expressed by one sole actor who for example condemned one technology in association with failings of one world of worthiness, immediately compared with another technology displaying the virtues of this same world of worthiness. The practice of juxtaposing the risks of a 'bad idea' with the opportunities of a 'better solution' combines diagnostic and prognostic frames together. As this argumentative proceeding seems to be recurring regularly in the analysed sample, we conclude that the conduct of model tests in other to legitimate one justification over another is a deliberate rhetoric strategy of mediatised discourse. Indeed, this finding corresponds to the conceptual premise alluded in section 3.2 arguing that the presence of both sides of an argumentation grants validity to the statement.

Also consistent with these theoretical insights concerning the ill-fitting attribute of environmental values as a world of worthiness, some types of argumentations were not applicative into the justification reading grid. However, these incompatible lines of reasoning could not directly be assigned to sustainability and no discernible higher common principle was identified, thus disqualifying these singularities for a hypothetical seventh world of worthiness. They either relate to future-oriented concerns that were not directly associated with the industrial world, or the lament of complexity and difficulty of settlement, again not coinciding with the industrial deficient perception of failure and lack of control.

5.2 CONTINUITY AND ALTERATIONS

Drawn from the previous section of this chapter, no clearly discernible change pattern in the portrayal of energy transition seemed to have occurred over the fourteen years of the recorded sample. Due to a generalised description of the sample through time, a sense of timelessness emanates from the analysis. Not without reason, as some statements held in 2006 are as well-founded today as they were on their release date. Nevertheless, a variation in the profusion and a diversity of energy transition-related topics has been noted throughout the observed timeframe. As the discursive pluralism will be assessed in the following section, this section is devoted to the depiction of deviations in the frequency of sampled articles through time.

5.2.1 Recurrence of Actor Groups and Tackled Themes

5.2.1.1 A Steady Constellation of Actors

An inventory recording the societal functions as well as the political orientations of involved actors is displayed on the table on the next page. It is to be noted that the authorship of articles is not included in this table, but some observations on the affiliations of authors of letters to the editors appear in the next subsection. As alluded to in the first section of this chapter, a few actors had affiliation overlaps and belonged to up to three different categories. The various political orientations were apprehended on a different level than the fields of occupation of

actors. Political actors were only identified as such whenever their function as council official, parliamentarian or candidacy for office was mentioned in the sample. Thus, in some instances, only the political party of actors was accounted for without retrieving their function within their party. Contrarywise, political actors that achieved some renown voiced out their opinion without the newspaper giving mention of the party these actors belonged to. Therefore, the quantity of retrieved political actors and the acknowledged party differ between each other, with 443 references of political functions versus 560 indications of political parties.

Apparent on the table is how the discourse on the energy transition is mainly concentrated around positions issued by political actors, particularly in 2011 and the period between 2015 to 2017. Politicians massively predominated the debate on every level of the issue and not even subject-specific industrial players or institutional representatives could outweigh the overly political aspect of the issue. Scientific actors were scarce in comparison to the other fields and were in some cases preceded by uncategorised actors. This political predominance may have been caused on the one hand by the very necessity of debating for voting items and possible incoming structural shifts, and on the other hand by the proximity this affiliation maintains with the media in general in contrast to other actor categories. The proportion by which political actors stated their opinion in contrast to other actor types was lessened over the course of 2018 and 2019, thus perhaps providing space for other actors and giving way for the expansion of the public discourse on other concerns.

TABLE 2: QUANTITY OF STATEMENTS BY ACTOR TYPE AND POLITICAL ORIENTATION PER YEAR.

Year	Actor Types						Political Orientations							
	<i>Politics</i>	<i>Industry</i>	<i>Admin</i>	<i>Assos</i>	<i>Science</i>	<i>Misc.</i>	<i>SP</i>	<i>FDP</i>	<i>GPS</i>	<i>SVP</i>	<i>CVP</i>	<i>BDP</i>	<i>GLP</i>	<i>Misc.</i>
2006	7			5					7					
2007	20	12	7	2	3	2	6	5	10	4	3			
2008	1	3	4	2					1					
2009	3	5	2		3			1	2	2	1			
2010	7	2	2				2	3	1	1				
2011	134	69	49	38	12	12	36	37	31	19	31	3	7	4
2015	63	9	7	16	12	6	17	16	14	22	12	11	6	4
2016	52	16	10	12	6	11	22	17	10	18	9	4		4
2017	82	30	20	17	4	6	23	16	6	8	23	7	3	1
2018	26	8	17	4		3	3	9	3	10	6			1
2019	38	27	17	7	7	3	9	6	7	7	3	3	3	
Total	443	181	135	104	47	43	118	110	92	91	88	28	19	14

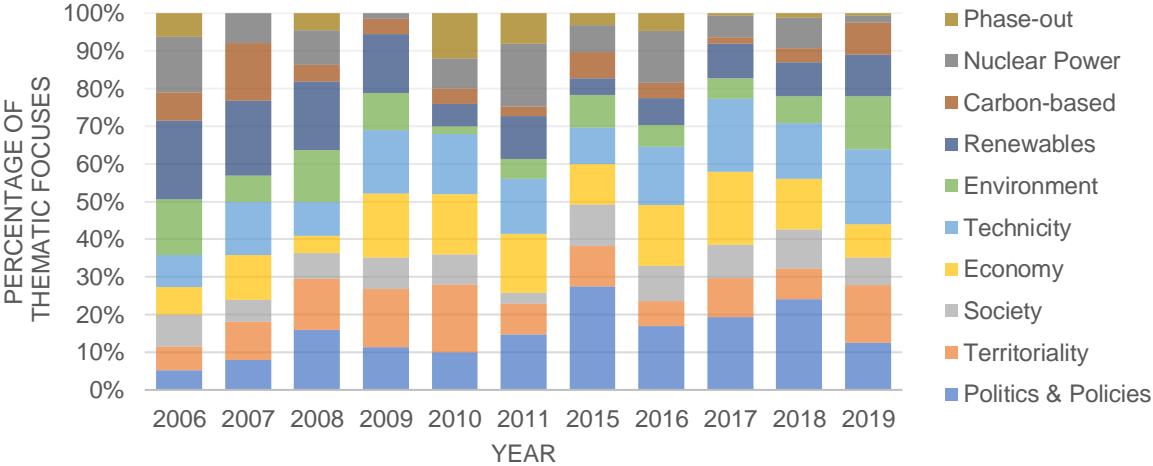
The Green Party had an acute presence in association with energy transition prior to 2010, soon taken over by the inputs of the liberal and socialist parties which underwent a sort of head to head contest over which of these two parties was the most frequently represented. From 2011 on, inputs uttered by the GPS diminished, but grew in importance again in 2019. Contrarily to the prior assumption that a continuous shift in dominating political orientation occurred every four years, the socialist party seems to have been slightly more active than its liberal-conservative counterparts between 2015 and 2018. Indeed, whereas the SVP dominated the discourse in 2015 and 2018, this prevalence was interrupted by the SP in 2016 and 2017. No discernible pattern can be attributed to centre parties. After its head to head competition in

2011 and in 2015, the FDP had a very steady presence until 2017 before the decreasing trend which hit most parties since 2018. The CVP had as much presence than the GPS in 2011, diminishing by half between 2015 and 2016 with a sudden regain of importance in 2017. Curiously, the GLP, which should have served as a bridge between environmental and economic values and would have been relevant for the debate on energy transition, had the least media exposure of all parties.

5.2.1.1 *Repertition of Tackled Themes over Time*

The chart below highlights the evolution of recurrent themes appearing throughout the public discourse in the sample. For this purpose, the most frequently mentioned keywords in association with energy transition were identified and summated. As the number of articles per year differs, retrieving the proportion out of the total count seemed to be the most appropriate manner to analyse this operation. It should be noted that the years prior to 2011 are not representative because they are comprised of less than twenty articles per year. Especially the years between 2008 and 2010 are problematical in this instance as they include only two to three articles. Thus, this period will be dismissed from the discussion on proportionality of tackled themes. Nonetheless, as the percentage of the contributions of each theme changes over time, a thematic progression is perceptible throughout the analysed time period. The emphasised themes corresponded on the one hand to those defined by Frei (2019) with some modifications as the territorial aspect was equally taken into consideration than the other five overarching themes of ecology, technicity, economy, society and policies. The territory variable refers to national and regional mentions, which proliferates in order to spatially situate the publicised activities. On the other hand, the types of energy source and the nuclear phase-out debate in the aftermath of Fukushima offered nuance in the evolution of the public discourse.

FIGURE 4: APPROXIMATE PROPORTION OF TOPICS APPEARING IN CODED ARTICLES PER YEAR.



As implied previously, political debates over new policy measures were of great importance when envisaging energy transition. Correspondingly, the most acute presence of politically linked topics occurred between 2015 and 2018 as new legislations in the form of (popular) voting items were envisaged and countered. Noteworthy were on this instance the planning of the Energy Strategy 2050 published in 2015 as well as the revision of the Energy Act voted

upon two years after. Comparing the proportion of otherwise stable themes such as technical and economic issues with the fewer proportion discernible in 2015, one might postulate that political presence in the discourse was even more important during that year than otherwise perceptible on this percentage display. Except for 2015, economic concerns predominated over societal ones, perhaps due to the upcoming parliamentary election that year in which politicians wanted to appeal to the people by voicing out civic issues. Otherwise, economic themes were prolific in 2011 and between 2016 and 2017. Technical topics such as energy security and efficiency were almost as frequent as economic subjects. However, in 2019, technologically linked issues took over the discourse in comparison to any other subjects.

Despite us having so far overlooked the years between 2006 and 2010 for lack of significance, we may nonetheless note that the overall proportionality of political, territorial, societal, economic and technical topics increased in representativity over that period. Or, in another point of view, the discourse around the environment and energy sources diminished until 2011. Not surprisingly, nuclear power and phase-out related issues were protruding in 2011 due to the nuclear reactor incident and re-emerged in 2016 in relation to the nuclear exit initiative. Whereas debates on renewable energy sources were comparatively decreasing from 2006 to 2010, they reached an increased interest in 2011 as discourse on alternative energy supply was envisioned. By 2015 however, the discussion over renewables was again not great, but slowly and steadily began to regain representation. Carbon-based themes being in association with greenhouse gas emissions, this category is also connected with environmental concerns and therefore grew in importance in proportion with the latter theme. Akin to renewables, concerns on climate and nature were predominant in 2006 but decreased through time. Apart from 2015 – the year in which the popularity of politicians was at stake and the discourse correspondingly more propense to tackle otherwise utopic themes, environmental topics were less evoked than renewables until 2019, year in which the balance shifted for many other subjects.

5.2.1.2 Politicisation of the Notion

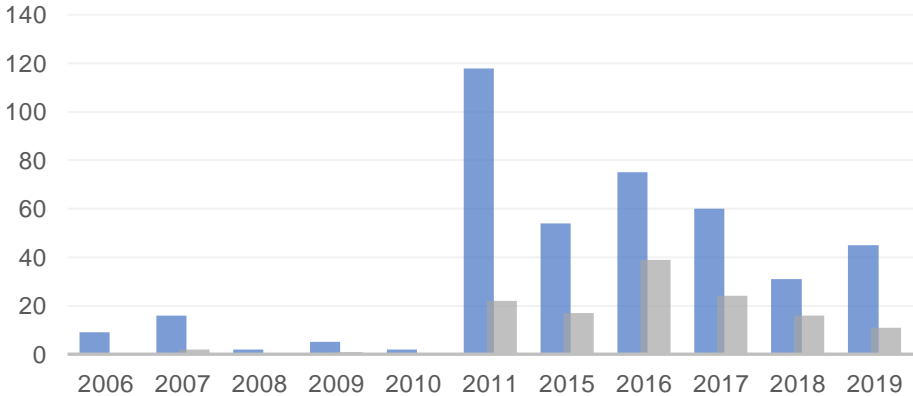
Over the course of the selection process of our data, we noticed that a comparatively large number of articles published in 2015 were dismissed from our sample as the frequent mention of energy transition did not offer any contextualisation of the keyword. This observation led us to the recognition that the use of the notion was name-dropped for electoral purposes. Indeed, referring to energy transition as an enumeration of issues filling the political agenda of parliamentary candidates – held at the same level as the refugee problem or welfare policies for instance – may indicate how the notion has been politicised and exploited as a buzzword a few months before the parliamentary elections happening in fall 2015. This observation is reinforced by the graph above, which highlights a proportionally significant appearance of politically linked topics during that year. Therefore, name-dropping energy transition seemed to legitimise the discourse of political candidates and became a trend among this group of actors. Nevertheless, in comparison to the national elections of 2015, the elections of 2019 did not include nearly as much political ‘publicity’ of the world of energy transition. This does not imply any loss of interest in the issue over time. Witnessing how the notion gained importance to the extent of being deliberately mentioned as an electoral justification ensures a wide diffusion of the issue so much so that a conventionalisation of the notion occurred on an even larger scale

than four years previously over the aftermaths of Fukushima. This conventionalisation may have opened the path to new meanings associated with energy transition, some of which are discussed over the course of this section and in the next chapter. Fewer mentions for the 2019 elections suggests that there was no necessity for political actors to barely evoke the issue of energy transition without context in the hope of gaining a few more votes on their favour. Rather, the notion may either have been interiorised by the population as no unnecessary mention of the word was delivered, or the issue was absent from the contemporary political agenda.

5.2.2 Commentaries and Opinion Papers

As alluded to in the previous chapter, many were the feedbacks of the readers over controversial issues. The proliferation of opinions is particularly evident in the letters to the editors' section. Individual position statements appearing in the correspondence columns regularly tackled the topic of energy transition. Not attempting to maintain neutrality, but on the contrary, aiming to portray a specific world vision in keeping with the course of current events, justification trends and polarised argumentations were more noticeable through this publication format. Also included in this category are the few guest commentaries present in the sample, thus adding 15 articles to the 241 commentaries. The commentary article format embeds entire features and is longer than letters to the editors.

FIGURE 5: YEARLY CODED COMMENTARY ARTICLES RESPECTIVE TO THE TOTAL OF CODED ARTICLES.



Legend: Total of Letters to the Editors (grey), which is a part of the Total of Coded Articles (blue).

Visible on the graph above, the frequency of publications written by the audience of the newspaper follows another trend than the total progression of coded articles. In some periods, namely in 2016 and 2018, the number of letters to the editors surpasses the number of usual newspaper entries. Letters to the editors were especially prolific in 2016, coincidentally the year following the national parliamentary elections in which the notion of energy transition was overused for the publishing of political agendas, but also the year in which the debate over the nuclear phase-out was the most vehement in anticipation of the 'nuclear exit' initiative. This raise in the mentioning energy transition by the public might hint towards a further step into the conventionalisation of the term. Not visible on the graph however, is that several letters to the editor present in published commentary sections were coded as one sole article. Whereas the number of articles identified as commentaries amounts to 132, the effectively coded individual commentaries almost account for the double with 256 entries. Nonetheless, the proportion

between the number of comment articles and the effective number of coded individual letters to the editors does not differ greatly. An inventory of each article identified in a commentary format, adjunct with their respective count of letters to the editors, is available in the annexe.

The two-thirds of the authors of these letters and commentaries did not specify their affiliation, thus obstructing any attempt of classifying them into social groups despite their sometimes clearly identifiable position in the political spectrum. A fourth of the authors were politicians and each party was represented. The remaining twelfth either stem from the energy, engineering or construction sector, sometimes with intertwined relations between industry and academia. The table below highlights the repartition of these three actor categories over time.

TABLE 3: YEARLY ISSUED AND CODED COMMENTS PER ACTOR TYPE.

Year	Actor Types							Industrials and scientists	Not Defined	Total
	with mentioned political orientation									
	SVP	GPS	CVP	FDP	SP	n/d	Total			
2007									2	2
2009		1					1			1
2011	1	4	3			2	10		23	33
2015	3	1	1	1		2	8		13	21
2016	5	2	2		2		11	1	64	78
2017	6	3	2	1	2	5	19	9	40	68
2018	4	1	3	8	2		18	1	15	34
2019									19	19
Total	19	12	11	10	6	9	67	11	176	256

Curiously, no commentaries that emanated from accredited political, industrial or scientific sources were present neither in 2007 nor 2019, yet one of the many similitudes between these two years encountered in this study. Moreover, taking the table in the previous subsection into consideration, the order of individual commentaries associated with political parties are interestingly practically in reverse order than the proportion of inputs medialised in ordinary feature articles. Therefore, where the SP was the most present on the media arena in the newspaper, this party issued the least opiated statements in the comments section. Inversely, the conservative party was the most active in publishing independent opinions as letters to the editors, perhaps as a compensation for an inkling that the point of views of this party were not sufficiently represented by the media. Self-evidently, the mention of a profession or a political orientation of the authors of such letters bestows implicitly more authority on their statements. However, independently from the potential perception of legitimacy depending on the authorship of letters to the editors, we notice a progressive popular appropriation of the subject with a culmination point in 2016. These comments are mostly concerned about regional issues and mainly include reviews and responses to published features and justifications of their voting intentions on the upcoming popular elections. Therein lies the conventionalisation process of the notion of the energy transition by the audience of the investigated newspaper as the discourse is appropriated and alimeted by the audience of the newspaper. As they are familiarised with the subject, they are relatively able to hold an opinion and express it.

5.3 THEMATIC TRENDS AND CONTROVERSIES

This section is dedicated to selected moments on the trajectories of specific topics in connection with energy transition. Interpretations and possible explanations on the origin of discursive changes will be suggested. Most of the illustrated quotes stem from letters to the editors.

5.3.1 A Cycle of Nuclear Rejection and Indulgence

5.3.1.1 An Evident Shift in Perception

We briefly indicated in chapter 2.2 how the nuclear power was already a lasting matter of debate prior to the Fukushima catastrophe due to the dangers of nuclear hazards and the inheritance of radioactive waste for many generations to come. Indeed, by 2006, a first hoarding attempt of the notion of energy transition was performed with the nuclear phase-out campaign 'AKW Nein Danke – Energiewende Jetzt', emphasised with symbolic actions in the likes of launching a popular petition in favour of solar energy on the day of the winter solstice, and organising a demonstration in remembrance of both the Chernobyl atomic disaster and the protest against the Kaiseraugst NPP project. The end of 2010 reports on the municipal vote in the city of Bern on the progressive nuclear phase-out, which was at that time at the opposite of the national energy strategy. This voting item was supported by the local energy supplier EWB, and the credibility of their implication may have hindered the counter-campaign by the adversary committee comprising of liberal-conservative politicians and trade associations (AZ, 29.10.2010). As this poll was effective only on a municipal level and another voting item on nuclear energy would occur four months after, these results were viewed with caution.

«Die Bernerinnen und Berner wollen den Atom-Ausstieg, aber nicht zu jedem Preis. [...] Aus dem städtischen Resultat auf die kantonale Abstimmung im Februar 2011 zu schliessen, wäre unseriös.»¹ (AZ, 29.10.2010)

Indeed, not quite one month prior to the atomic incident, and not given the mention of in the sample, the Canton of Bern voted in favour of an NPP reconstruction designed to replace the Mühleberg facility destined to be shut down by 2020 (Politnetz, 2011).^{vi} In consequence of the Fukushima catastrophe, the Federal Council interfered and declared the immediate suspension of the recently ratified NPP project. The alacrity by which every recorded actor agreed on condemning local power plants lasted for only one month, after which controversies and denunciations of turncoats started to emerge among liberal-conservative actors. Bernese liberals entered an internal conflict as a part of the party agreed on the federal intervention and others wanted to honour the decision of the population despite the general dismay over Japan.

«Was in Japan erfolgt ist, kann auch in der Schweiz passieren. Für schlimme Zufälle braucht es keinen Tsunami. Ich bin nicht länger bereit, dieses Risiko zu tragen»: Während Parteipräsident Flück den Delegierten einen mittelfristigen Ausstieg aus der Atomenergie und damit eine Neupositionierung schmackhaft machen wollte, zog sich ein tiefer Graben durch die Delegierten.»² (AZ, 14.04.2011)

¹ "The Bernese want a nuclear power phase-out, but not at any price. [...] It would be unsound to conclude a comparable outcome to the city's results for the cantonal vote in February 2011."

² "What happened in Japan can also happen in Switzerland. A tsunami is not needed for bad coincidences. I am no longer prepared to take this risk": As the President of the [Liberal] Party pitched a new positioning in the form of a medium-term nuclear energy phase-out to the delegates, a gap grew between them.

Divisions also happened amid centre parties. The CVP reportedly found itself in a dilemma as the new Head of the Energy Department Doris Leuthard they elected as their party representative in the Federal Council originated from the nuclear Canton of Aargau and stood for an intervention some of them were not yet ready for. Indeed, the plan of constructing a fourth NPP plant Beznau 3 was issued in 2008 and the fate of this project was unresolved given the new circumstances. However, the very concerned Argovian economy fell back on its legs and aligned itself to the Federal decree as the Cantonal government announced their intention of diverging into cleantech with planned collaboration with the trade association 'Swisscleantech' barely three months after the Fukushima incident. Even local energy directors and former advocates for nuclear replacement plants concurred with this strategy. Thus, what could have been a long cantonal conflict was resolved within a comparatively short time of three months.

Statt jahrelang darauf zu warten, ob neue Kernkraftwerke vielleicht doch eine Chance bekommen, wählt die Regierung eine Vorwärtsstrategie [...]. Bereits habe die Regierung verschiedene Instrumente zur Wirtschaftsförderung entwickelt, um die Energiezukunft aktiv mitgestalten zu können.³ (AZ, 17.06.2011)

In the national context too, the momentary euphoric uprising against nuclear power was eclipsed with sober inquiring over the concrete feasibility of a nuclear phase-out in Switzerland. Indeed, abolishing nuclear power would have implied a rift in the national energy production mix and resorting to the electricity alimentation from abroad. The line of reasoning all parties could agree on was to not be dependable on foreign electricity as the resources' origin could not be controlled. In consequence, discord arose on the planning of an adequate sovereign energy mix. By the end of 2011, the Federal Council verified that an energy future without nuclear power was technologically possible in Switzerland. Meanwhile, the city of Aarau had – with slim majority – agreed on a municipal nuclear phase-out by 2035.

5.3.1.2 Not Quite Embracing Nuclear Phase-Out

Numerous actions happened until 2015. Among them, the NPPs Beznau 1 was put out of service for maintenance purposes and the closure of Mühleberg was announced for 2019. The Confederation would assume the insurance risks linked to nuclear hazards as private insurance companies no longer wanted to cover them. In the meantime however, the attitude toward nuclear power had drastically changed and statements supporting this energy source were regularly published.

Warum die Kernkraft[-werke], die bestehende und auch ihre Nachfolger verdammen? Schliesslich wird die Erde nicht durch AKWs, sondern durch Kohle, Öl, Erdgas und Hunger nach Fleisch aus dem Gleichgewicht gebracht.⁴ (AZ, 14.08.2015)

As the national parliamentary elections were approaching, the discourse was centred around energy among other themes. Seventy per cent of the Argovian cantonal candidates were in favour of the energy transition. The liberals were evenly divided on the subject and most candidates from conservative circles were for the preservation of nuclear power utilities (AZ,

³ Instead of waiting for years to see if new NPPs are given a chance, the government chooses a forward-looking strategy [...]. The government has already developed various instruments for economic development in order to be able to actively shape the future of energy.

⁴ Why condemn the existing and succeeding nuclear power [plants]? After all, the earth is not destabilised by NPPs, but by coal, oil, natural gas and the hunger for meat.

10.09.2015). The most prominent Swiss enthusiast for the future of atom was Hans-Rudolf Lutz, member of the SVP and former director of the Mühleberg facility. A regular writer of the readers' column in the *Aargauer Zeitung* – our sample included five of his contributions –, he founded the pro-nuclear association 'Kettenreaktion' in response to the common sentiment against the resorting of this energy source.

Dass die Energiewende mit dem Ausstieg aus der Kernenergie ein «Jahrhundertunsinn» ist, daran liess Lutz keinen Zweifel.⁵ (AZ, 20.11.2015)

Nicht die Kernenergie sei das Problem, vielmehr hätte das AKW in Fukushima mit einer Mauer geschützt werden müssen. «Die Energiestrategie ist eine Panikreaktion.»⁶ (AZ, 20.01.2016)

By 2016, the progressive nuclear phase-out was advocated by the Energy Strategy 2050 without any explicit deadline in order to gradually find means of replacement for the national energy mix. However, the GPS was not satisfied with this motion. After the rejection of their call for an ultimatum by the National Council, the 'nuclear exit' initiative was submitted for the people to vote. As this voting item proposed to close each NPP after 45 years of service, debates over the longevity of these facilities started to emerge, coupled with food for thought provided in large quantity by many letters to the editors. Comparable to the debates occurring five years prior regarding the keeping of nuclear activity, many were preoccupied over the potential energy supply replacement as alternatives to this power source were either less reliable (renewable energies), less clean (gas) or originated from even more polluting German importations (black or brown coal). The rationale was split between the energy supply security and the security of the energy source itself.

Je mehr die Bevölkerung der Schweiz wächst, je komplexer sind auch die Themen, über die das Stimmvolk befinden soll, wie eben die Energieversorgung. Wer sagt uns, was richtig ist: der Sumpf des Internets, das Bauchgefühl, mein Boulevardblatt oder der «Arena»^{lvii}-Teilnehmer? Vielleicht am Ende gar nicht abstimmen? Die Sache ist unübersichtlich, aber sowieso sind AKW viel gefährlicher als alles, was man sonst anzapft, das weiss seit Tschernobyl und Fukushima jedes Kind. Hauptsache, die Akkus sind geladen, die Haustechnik läuft und der Zug fährt frühmorgens. Wenn man nur will, geht es sicher, und erst noch nuklear sicher. Von wegen Sicherheit: Doch noch mal hinschauen, bevor man notabene in der Verfassung niederschreibt «Der Betrieb von Kernkraftwerken zur Erzeugung von Strom und Wärme ist verboten», gefolgt von Bestimmungen zur Stilllegung unserer Atomkraftwerke. [...] Fazit: Ich würde lieber auch keinen AKW-Strom brauchen, doch scheint mir diese Initiative unausgegoren und zur Erreichung der nuklearen Sicherheit untauglich.⁷ (AZ, 26.10.2016)

Seit Tschernobyl und Fukushima sollte es jedem vernünftig denkenden Menschen klar geworden sein, dass weder Mensch noch Technik unfehlbar sind. [...] Wenn mir meine

⁵ Lutz left no doubt that the energy transition with the nuclear energy exit is "the nonsense of the century".

⁶ Nuclear energy is not the problem, the Fukushima NPP should have rather been protected with a wall. "The energy strategy is a panic reaction."

⁷ The more the population of Switzerland grows, the more complex are the issues on which the electorate should be concerned, such as energy supply. Who tells us what is right in the end: the swamp of the internet, gut instinct, my tabloid or the "Arena"-participants? Maybe is it better not to vote in the end? The matter is unclear, but every child knows since Chernobyl and Fukushima that NPPs are the most dangerous things you can ever fathom. The most important thing is that batteries are charged, building services are running and trains leave in the morning. It works for sure if you only want, it is reliable and even nuclear safe. Safety, as if: Look closely again before you write "The operation of nuclear power plants is prohibited" in the constitution, followed by provisions for decommissioning our NPPs. [...] Conclusion: I would prefer not to need nuclear power either, but this initiative seems callow and unsuitable for achieving nuclear safety.

Badewanne ausläuft, was rein theoretisch nicht möglich ist, kann der Schaden mit Bodenlappen und Bautrockner behoben werden. Läuft aber eine AKW-Badewanne aus, was wiederum unmöglich ist, hilft weder Bodenlappen noch Bautrockner. Nicht einmal alles Geld dieser Welt kann diesen Schaden beheben, da hilft nur noch auswandern, sofern man noch genügend Zeit hat. Wir werden von der Atomlobby erst wieder etwas vernehmen, wenn sie sich weit vom Schuss auf einer sicheren Insel eingeknistet haben. Ihre Botschaft wird dann lauten: Sorry, wir haben nicht geglaubt, dass so etwas passieren kann. Herzlichen Dank für die späte Einsicht. Ein Ja an der Urne ist keine Frage von Links oder Rechts, sondern eine Frage der Vernunft.⁸ (AZ, 08.11.2016)

In the end, the 'nuclear exit' initiative did not get the majority, thus permitting the five Swiss NPPs to be operated as long as they are safe without any runtime limit according to the law. However, the construction of new NPPs was prohibited. The deliberation on the matter should have been closed by then, however, some readers from the newspaper occasionally continue to contribute to the debate. Thus, the attitude shift toward nuclear power may have been partially caused by a ponderation between the worst possible scenarios. With hindsight and more distance to the events that led to the consideration, discussion and decision of a national nuclear phase-out, some commentators tended to think that the progressive shutdown of nuclear energy facilities was rushed and factually unfounded. "By prohibiting the issuing of general licenses for nuclear power plants, the practical application of nuclear technology is impossible. The incentive on doing research in the field of nuclear energy is thereby absent, leading to the potential opportunity miss on the further development of this technology. The ban on the granting of general licenses therefore indirectly leads to a ban on thinking about the further development of core technology in Switzerland." (AZ, 03.10.2018). As of now, the renunciation of nuclear power is not as vehemently on the agenda as before and may even be considered as an appropriate energy source to cover the shift in sustainable energy sources (Charlez, 2019).

5.3.1.3 *The Axpo and BKW Cases*

Judging by some of the medialised comments on NPPs in the aftermaths of the Japanese power plant disaster, it would be easy to assume that nuclear utility operators would experience momentary bad press as well. The investigated newspaper shows a trend opposite to this presumption, as nuclear companies were usually depicted as victims of the circumstances. According to the features of the *Aargauer Zeitung*, the Bernese company BKW had to principally go through policy proceedings and jurisdictions. It was mentioned in the previous subsection that, in the immediate aftermaths of Fukushima, the Federal Council suspended the popular voting result of constructing a new NPP meant to replace the Mühleberg facility. In addition to this directive, the Confederation ordered the cancellation of a similar voting item in the Jura Canton, which was coincidentally also concerning BKW, the same company that oversees Mühleberg. On the spur of the moment, the CEO of BKW issued his approval to this intent

⁸ Since Chernobyl and Fukushima, it should have become clear to every reasonable person that neither man nor technology is infallible. [...] If my bathtub runs out, which is theoretically not possible, the damage can be repaired with floor rags and a dehumidifier. However, if a NPP bathtub runs out, which in turn is impossible, neither floor rags nor dehumidifiers help. Not even all the money in the world can remedy this damage, so the only help is to migrate if you still have enough time. We will only hear something from the nuclear lobby once they have nested far away from the blow on a safe island. Their message will then be: Sorry, we did not believe that something like this could happen. Thank you for the late insight. A yes in the ballot is not a question of left or right, but a question of rationality.

but warned against hasty conclusions. Two months after this statement, when discussing the imminent policy decision regarding the future of nuclear power exploitation, the chairman of the company was strongly opposed to outcomes moving in this direction:

*Die BKW steige erst aus der Atomkraft aus, wenn als Alternative dazu ein Gaskombi-kraftwerk gebaut sei.*⁹ (AZ, 21.05.2011).

Again in reaction to Fukushima, the Federal Nuclear Safety Inspectorate ENSI requested the revision of the Mühleberg plant for safety measures (ENSI, 2011). The utility was temporarily interrupted and questions over the viable future of BKW arose, as it stood in a conundrum between the very expensive dismantling costs of Mühleberg versus its maintenance costs in the middle to long term. By 2012, the Federal Court had ordered the closure of the Mühleberg facility for the next year, but the nuclear regulatory authority granted ten years for BKW to remedy the safety deficiencies of their NPP. However, knowing the remaining life term of Mühleberg amounted to ten years, the retrofitting investments demanded by the ENSI would have not been worthwhile for long-term operation (Jud, 2019). Therefore, BKW decided to close their utility by 2019 after 47 years of service. The publication of this intent was well-timed considering the ensuing debate over the longevity of NPPs and the nuclear exit initiative launched by the GPS. In sum, as it was ordained to be closed by 2020 before the Fukushima catastrophe, the subsequent ceasing of the activities of the Mühleberg facility the 20th of December 2019 comes full circle with what was initially intended.

The operator of the Beznau 1 and 2 NPPs Axpo was less the subject of controversy than its Bernese homologue. This observation makes us question whether the Argovian newspaper might be cosying the locally anchored institution or if polemics in relation to the company occurred apart from the subject of energy transition. Comparatively to BKW which was entangled in statutory conundrums, there was no report of any investigations fulfilled by the ENSI over both Beznau NPPs and most articles referencing the energy company regarded the financial difficulties it was confronted with. The mentioned issues were the downfall of their stock market value, the dozen of millions of Swiss francs Axpo had invested in the planning of a third Beznau utility and that were lost to the project's suspension after the Fukushima accident, as well as the loss of the tax advantage in the municipality of Döttingen in which the company has its NPPs installed. Furthermore, the portrayal of Axpo spokespeople was constantly shed in a positive light in regard to the objectives of energy transition, as the firm had uttered as early as 2006 its intent to invest in the expansion of renewable energy in order to be Swiss market leader in this industry segment. Since then, they seemed to have been very concerned about environmental predicaments and lowering energy consumption.

*Ein düsteres Bild der Energiezukunft malte der Leiter der Kernenergie bei der Axpo AG: Die Weltbevölkerung wächst massiv, Kohlestrom wird stark ausgebaut, das Klima verändert sich. Mit der Erwärmung werde auch viel im Permafrost gebundenes Methan freigesetzt, «das ist viel schlimmer als das Ozon». Der Stromverbrauch pro Kopf der Schweizer Bevölkerung müsse um 46,8% verringert werden.*¹⁰ (AZ, 23.06.2011)

⁹ BKW will only withdraw from nuclear power if a combined cycle gas turbine is built as an alternative.

¹⁰ The head of nuclear energy at Axpo AG portrayed a gloomy picture of the future of energy: the world's population is growing massively, coal power is being greatly expanded, and the climate is changing. The warming also releases a lot of methane bound in the permafrost, "that is much worse than the ozone". The electricity consumption per capita of the Swiss population must be reduced by 46.8%.

Nevertheless, prior to the establishment of the Energy Strategy prioritising clean energy solutions, the head of Axpo suggested to resort on gas-powered plants to replace nuclear exploitation but did not consider this option as cost-effective because of the obligation to pay high compensations for the generated carbon emissions. Moreover, as the firm had to temporarily close one of their facilities for maintenance purposes between 2015 until 2018, Axpo was occasionally the subject of criticism on the part of a few anti-nuclear letters to the editors. The GPS organised a manifestation on its headquarters the day the NPP was put back into operation. The unique published controversy concerning the firm occurred in March 2019 as a member of the SVP was elected in the directory board of the company. Being himself part of the local administrative organ that accredits concessions for power plants, the SP criticised the potential conflicts of interest of conciliating politics with the economy. In response, the newly elected candidate affirmed his intent to step down from his position in the Grand Council. Al- luded to, but not medially reprimanded, was a similar conflict of interests on the side of BKW two years prior, as their administrative president was part of the BDP in the National Council by then (AZ, 22.05.2017).

5.3.2 Jumping on the Sustainability Bandwagon

5.3.2.1 From National to Local Interest

In contrast to nuclear issues which were evenly brought forward through time even years after decisions have been undertaken, the debate around sustainability occurs by very dense intervals of articles on the subject – usually in relation with current voting items – to be suddenly abrupted for months until suddenly reemerging for a short but intense period. Regardless of its initial scarcity however, the consideration of renewable energy sources is existent since the beginning of our sampling period. The subject is not only brought to the table by leftist parties, but also by industrial actors who manifested their intent to invest many hundred million francs in these technologies. Despite these intentions, the GPS criticised the national tardiness to act and “miss the boat of energy transition” in contrast to the European Union, and stressed on the necessity of expanding the energy-mix portfolio for supply security reasons.

Zwischen heute und dem Jahr 2015 wird die Förderspitze bei Öl, Gas und Kohle erreicht sein. Auch bei Kernkraftwerken sei man produktionsmässig im Höchstbereich angelangt. Kurz und schlecht: Die nicht erneuerbaren Energien haben keine Zukunft. Darum müssten die erneuerbaren Energien konsequenter angewendet werden. «Wir steuern auf eine Energielücke zu, nicht auf eine Stromlücke». Mehr als zwei Drittel des Energiekuchens bestehen aus Gas, Treibstoffen und Erdöl, die Verbrennung ist dringend zu reduzieren; nicht zuletzt wegen CO₂ und Klimaerwärmung.¹¹ (AZ, 23.12.2006)

In early 2007, the Federal Council suggested an energy strategy proposal involving the construction of combined cycle gas turbines as a measure to secure national and efficient energy supply. We can approximately trace the political concern for the climate in relation to energy

¹¹ The peak in oil, gas and coal production will be reached by 2015 by today standards. The NPPs will have reached the highest level in terms of production too. In sum: non-renewable energies have no future. That is why renewable energies have to be used more consistently. “We are headed for an energy gap, not a power gap”. More than two thirds of the energy pie consist of gas, fuels and oil. The combustion must be reduced urgently; not least because of CO₂ and global warming.

future to this time period, as the issue of climate change is utilised as a mean of justification and is subject to diverse perceptions of urgency depending on the political party.

Trotz bekannten Fakten (zunehmender Schadstoffausstoss in die Atmosphäre, Klimaerwärmung) gibt es bei uns tatsächlich Politiker, die diese Fragen «gelassen» angehen möchten, ein Ausdruck, der konkret besagt: Ja nichts Verbindliches unternehmen.¹² (AZ, 22.03.2007)

By contrast, Moritz Leuenberger, then Head of the Federal Department of Environment, Transport, Energy and Communications, describes sustainable energy future as of fundamental importance, and equates the issue of climate change to a war-like crisis. This rise in prominence might not only originate from both the then newly published IPCC report as well as the highly medialised documentary “An Inconvenient Truth” over which even the Argovian local newspaper had dedicated a column, but also by the unspecified debate on the opening of the energy market that year. Apart from renewable energy projects in the Zurich region, sustainability-related subjects were not issued until 2011. That year, approximately an article out of ten mentioned the environment in connection to the energy transition. In parallel to the anti-nuclear proceedings and the practicability of replacing this source of energy, liberal-conservative politicians and the electricity industry envision the construction of combined cycle gas turbines, an endeavour that is not shared by the GPS who accuses their colleagues on setting the wrong priorities. Common ground is achieved with the incidence of the Swisscleantech trade association that conciliates economic viability with the environment. Correspondingly to their newly introduced cantonal energy efficiency measures, Aargau was referred to as the “energy-saving energy canton” (AZ, 28.10.2011)

Für den Aargau ist es dabei wichtig, dass die Klimapolitik «jetzt nicht fallen gelassen und dem [Atom-]Ausstieg geopfert wird». [...] Zentral ist für den Aargau eine für alle erträgliche Energiepolitik: Für Klima und Umwelt, für die Wirtschaft und die ganze Gesellschaft.¹³ (AZ, 17.06.2011)

The discourse around sustainability occurred mainly in a regionally anchored level. Local incentive measures were undertaken in order to foster the development and usage of renewable energies, such as the simplification of administrative requirements for installing solar panels. Despite the rise of their project planning, scepticism perdured over the domestic know-how and viability of renewable energy and potential competition from abroad. Furthermore, an electricity efficiency project was impeded by budget cuts in Solothurn and interregional struggles arose when an Argovian-initiated wind farm project on the frontier of the canton of Lucerne was rejected for wildlife and nature protection concerns. During the national debate on the future of energy and coal-based alternatives, many were the articles deploring the non-consideration of CO₂-emissions and climate goals.

¹² Despite known facts (increasing pollutant emissions into the atmosphere, global warming), there actually are politicians who want to “calmly” address these questions, an expression that really says not to undertake anything bindingly under any circumstances.

¹³ It is important for Aargau that the climate policy “is not dropped now and sacrificed to the [nuclear] exit”. [...] An energy policy that is tolerable for everyone is central to Aargau: for the climate and the environment, for the economy and for society as a whole.

5.3.2.2 *The Draughts behind the 'Green Wave'*

In order to accomplish the Energy Strategy 2050 targets, the Confederation had increased the means of promotion for renewables in 2014 and even allowed clean energy power plants to be built in protected natural areas, thus rising objections for biodiversity concerns. A motion of introducing an energy tax was submitted by the GLP but severely dismissed. In its place, the Federal Council had implemented their own version of the CO₂ Act, introducing a tax on energy, but paradoxically not on greenhouse-gas inducing petrol. By mid-2015, akin to 2011, complaints arose about the governmental inertia on mitigating climate change.

«Das Klimathema braucht einen breiten Diskurs, der ist zwingend und dringend.» Doch solange sich die Regierung weigere, den Atomausstieg umzusetzen, werde es schwierig [...]. Zudem verlangsame der tiefe Ölpreis die Klimadebatte erheblich. «Das Risiko ist deshalb gross, dass [ein klimarelevantes Anliegen] im Rat mit ein, zwei Kommentaren weggewischt wird.»¹⁴ (AZ, 25.08.2015)

In parallel however, individual regional projects that implement renewable energy sources, most of them employing solar and geothermal energies. More global topics were covered with a semblance of interest in anticipation of the debates occurring on the Parisian Climate Conference later that year. 'Soft topics' on sustainability were published, in which political celebrities underwent a survey to determine which of them were the most environmentally friendly and a summary of positive regional spatial planning interferences were attributed to a socialist politician. The review of the actual Paris Agreement and the issuing stakes for Switzerland were reported. After this short-lived prominence, no sustainability-related news followed for over half a year. Then, a few months before the 'nuclear exit' initiative was voted against in 2016, the 'green economy' initiative was under discussion and heavily criticised for the drastic resource-saving measures it proposed.

Immer kritisieren Linke und Grüne, dass die Schweiz sich von Europa isoliere. Und nun stimmen wir über die Volksinitiative «Grüne Wirtschaft» ab, die aus diesem Lager lanciert wurde – und die unser Land tatsächlich in eine ökologische Insel verwandelt, wenn sie angenommen wird. Sie würde unseren Alltag massiv verändern. Ohne rigorose Zwangsmassnahmen liessen sich deren Ziele nicht erreichen. [...] Und was nützt es der Umwelt? Nichts. Denn produziert wird dann anderswo.¹⁵ (AZ, 17.09.2016)

The popular initiative was strongly refuted by the people, upon which topics associating energy transition with sustainability were once again abruptly eclipsed except for the few publications on the unfolding of renewable energy projects as well as occasional letters to the editors on the matter. Debate arose again in spring 2017 as the Swiss population had to vote for the new Energy Act. Many articles and comments seized the occasion to recapitulate what were the stakes – nuclear hazard, energy imports from unreliable and polluting sources, unsteady renewable energy sources, climate change and the protection of landscape – and what had been

¹⁴ "The climate issue needs a broad discourse, which is imperative and urgent." But it will be difficult as long as the government refuses to implement the nuclear phase-out. [...] In addition, the low oil price is slowing the climate debate considerably. "The risk is therefore high that [a climate-relevant request] will be wiped out with one or two comments in the Council."

¹⁵ The Left and Green Parties repeatedly criticise that Switzerland isolates itself from Europe. And now we are voting on the "Green Economy" popular initiative that was launched from this camp - and that will actually turn our country into an ecological island if it is accepted. It would change our everyday life massively. Without rigorous coercive measures, their goals could not be achieved. [...] And what does it do for the environment? Nothing. Because then production takes place elsewhere.

undertaken until then. Most of their authors were in favour of this voting item and appealed to approve the bill for the sake of future generations. The debate was however still animated.

Das Theater um die Energiestrategie 2050 ist kaum auszuhalten. Glaubt man den Naturschützern, verunstalten die Windräder die Natur ins unermessliche. Glaubt man den Tierschützern, werden pro Tag an die 100 Vögel zu Tode geschlagen von den rotierenden Windrädern. Also was sollen wir tun? Neue Wasserkraftwerke bauen? Kommt irgendwie auch nicht infrage. Wenn man eine Staumauer erhöhen will, sind es bestimmt die Grünen und Naturschützer, die reklamieren, weil irgendeine Pflanze im Wasser verschwindet.¹⁶ (AZ, 16.05.2017)

The success of this vote brought about a drastic diminishing in sustainability-related articles yet again. During the first semester of 2018 in Aargau, the revision of the cantonal Energy Act which includes the recognition of biogas as a renewable energy source and a tax on unrenovable energies in the housing sector brought forward another news outbreak on this topic. On the one hand, some opponents referred to the purpose of the motion as “so-called energy transition” and viewed the costs as unbearable for middle-income tenants. On the other hand, some proponents denounced the hypocrisy of liberal-conservatives for deliberately spreading fearmongering arguments on this motion while bragging over the ‘Energienstadt’ label of their certified energy-efficient city (AZ, 05.06.2018). On a national level, a scandal broke out as it was revealed the Confederation had diverted millions of francs initially intended for a never-completed awareness campaign on energy transition, for which authors of letters to the editors demanded retribution.

Never before were as many articles dedicated to sustainable energy transition than in 2019. This sudden interest might be perhaps due to the stir of the climate strikes that began earlier that year. Some articles were indeed about social movements such as performances by the extinction rebellion on air transport and invitations to soft mobility events. The previously mentioned wind farm project across Lucerne and Aargau is still debated to this day as birds and bats might be crushed from the contraption. Despite these obstacles, local politicians continued eagerly supporting small-scale projects and were, across all parties, confident on the feasibility of sustainable energy transition. Unlike the authors of the comment sections who hold pessimistic views on the future and underlines the general unwillingness to concretely act as soon as money and individual comfort are compromised.

Da sind sie, seit vielen Wochen schon, die Klimademos. Sie erwecken den Eindruck, dass etwas in Bewegung geraten ist. Dass die Schweiz grüner wird. Doch da ist eben auch diese Abstimmung vom vergangenen Sonntag. Da stimmten die Berner über ihr neues Energiegesetz ab. Es ging um das Klima, darum, was wir zu seinem Schutz tun wollen, ganz konkret. Die Berner sagten Nein, knapp zwar, aber eben doch Nein. Sie liessen sich überzeugen von den Wirtschaftsverbänden, von der FDP und der SVP, die vor einer Regulierungsflut gewarnt hatten und steigenden Kosten. In drei Kantonen wurden seit vergangenem Juni über klimafreundlichere neue Energiegesetze abgestimmt. Und damit auch um die Konkretisierung der Energiestrategie 2050. Zwei der drei Kantone sagten Nein. Alles Klima? Eher nicht. [...] Wir alle wollen keinen Klimawandel. Doch je näher der Klimaschutz dem eigenen Leben kommt, desto kleiner wird

¹⁶ We cannot stand the fuss around the Energy Strategy 2050 any longer. If you believe the conservatives, the wind turbines disfigure nature to an immeasurable extent. If you believe the animal rights activists, around 100 birds are beaten to death by the rotating wind turbines per day. So what should we do? Build new hydropower plants? Somehow it is out of the question. If you want to elevate a dam, the Green Party and nature conservationists will definitely complain because some plants would disappear in the water.

*der Wille, tatsächlich etwas zu tun. Das gilt fürs Portemonnaie, aber auch für den Lebensstil. Mal eben nach London fliegen, zum Shoppen? Das liegt schon noch drin. Der Windpark auf dem Lieblingshügel eher nicht. [...] Es ist unverständlich, dass die großen Wirtschaftsverbände und bis zum spektakulären Meinungsumschwung auch der Freisinn eine griffigere Klimapolitik primär als Gefahr für den Standort sehen. Man könnte das auch anders angehen. Lustvoller, inspirierter. Besonders in einem Land, das sich gerne Innovationsweltmeisters rühmt.*¹⁷ (AZ, 18.02.2019)

Interestingly, a comment uttered twelve years prior summarises the essence of this rather long complaint: “The vociferous request for energy transition contrasts with the willingness to individually do something for the promotion of renewables” (AZ, 14.06.2007). When juxtaposed, these comments might attest the overall sentiment on how nothing seems to have virtually changed for over a decade. Indeed, akin to debates which occurred a dozen of years earlier, Argovian politicians raised the possibility of installing combined cycle gas turbines as energy supplier replacements for NPPs once their runtime had ended. Surprisingly however, a hint of a perception change arose on the part of liberal-conservative parties. Whereas they were negating it a decade ago, the SVP is now acknowledging the importance of mitigating climate change and pollution, but consider it a matter of individual responsibility and deem any institutional intervention as freedom-destroying (AZ, 26.03.2019).

5.3.3 Absent Theme or Next Issue?

5.3.3.1 The Non-Mobilisation of Mobility

An important subtheme orbiting around energy transition has seemed to be missing from the sample analysis. Indeed, in comparison to the housing sector and related topics such as energy-efficient constructions and decentralised heating systems that were recurrently talked about in the newspaper, mobility and freight were scarcely mentioned. The number of petrol-powered vehicles is steadily increasing in Switzerland and road transportation is responsible for almost 40% of greenhouse gas emissions (FSO, 2019b) and alternatives to combustion engines such as electric vehicles have penetrated the market since half a decade. This topic would have been relevant in the public discourse around energy transition but has practically been left out. A mobility-related issue only appeared in 2017 as the Argovian government voted against the creation of a fund for sustainable vehicles. Apart from this brief debate, a pair of articles featured communal implementations of solar-powered cars. Thus, the medialised shortcomings of this subject was bemoaned by representatives of the Green and Green Liberal parties, in which the responsible Minister was held accountable for.

¹⁷ There they have been, for many weeks by now, the climate strikes. They give the impression that something has started to move. That Switzerland is getting greener. But there was also this vote from last Sunday. The Bernese voted on their new energy law. It was about the climate, about what we specifically want to do to protect it. The Bernese said no, by slim majority, but no. They were convinced by the business associations, the Liberals and the Swiss People's Party who had warned them of the incoming flood of regulation and rising costs. Since last June, three cantons have voted on new climate-friendly energy laws. And with it also about the concretisation of the Energy Strategy 2050. Two of the three cantons said no. All for climate? I don't think so. None of us want climate change. But the closer climate protection comes to one's own life, the poorer the will to actually do something. That applies to your wallet, but also to your lifestyle. Wanting to fly to London for shopping? That is still okay. Not quite so for a wind farm on the favourite hill. [...] It is incomprehensible that the large business associations and, until a spectacular change in opinion, also the Liberals see an effective climate policy primarily as a danger. You could do it differently. In a more engaged and inspired manner. Especially in a country that likes to boast as innovation world champions.

*Doris Leuthard ist die beste CVP-Politikerin, aber auch sie handelt bei weitem nicht ökologisch genug: Ihre Energiewende ist bloss ein kleiner Schritt in die richtige Richtung. Die Schweiz stösst beim Verkehr nach wie vor gleich viel CO₂ aus wie 1990 – für ein wohlhabendes Land ein Debakel, das gegenüber kommenden Generationen nicht zu verantworten ist.*¹⁸ (AZ, 25.08.2017)

Several inferences might explain the long omission of this theme in the media. First, journalists may have had easier access to spokespeople from the energy and construction sector in relation to the automobile industry. Yet, this industry is as locally anchored as the other two in the canton of Aargau. Second and in relation to the former hypothesis, transportation may have proven to be a more sensitive subject to tackle because of the regional link to the industry and may have been perceived as a possible obstruction to the freedom of individual mobility as trade would have been compromised. Nevertheless, any well-informed and controversial topic would have shown more potential of newsworthiness in any published media. The third more conceivable assumption that coincidentally undermines the first one, is that the Federal Council only included soft mitigation measures in the transportation sector such as a threshold on the permitted amount of CO₂ emissions per kilometres in the Energy Strategy 2050 and the energy tax introduced in 2015 was not applicable on petrol (SFOE, 2018). Therefore, a chance of debate could not occur at the same level than other energy transition topics if the issue was not deemed as relevant in the first place. Last explanation, which always must be kept in mind for this analysis, may be traced back to the research method of this study. As the sample was created by only executing keyword research, the possibility of having missed related subjects to energy transition persists. Hence, the issue of mobility may have been tackled in association with other keywords than energy transition.

However, since mid-2019, the discourse around energy transition suddenly shifted towards a strong association with the automobile industry. Including articles that report of the inefficiency of cars for short distances, the potential of hydrogen vehicles, electric cars implemented for public services – not to mention their unsustainable production backgrounds – and performances by climate strike activists against air traffic pollution, the recent interest in the issue relates to the rise of environmental themes occurring that year as noted in the previous subsection. Despite many comments on the subject, we cannot determine whether this phenomenon will be perennial.

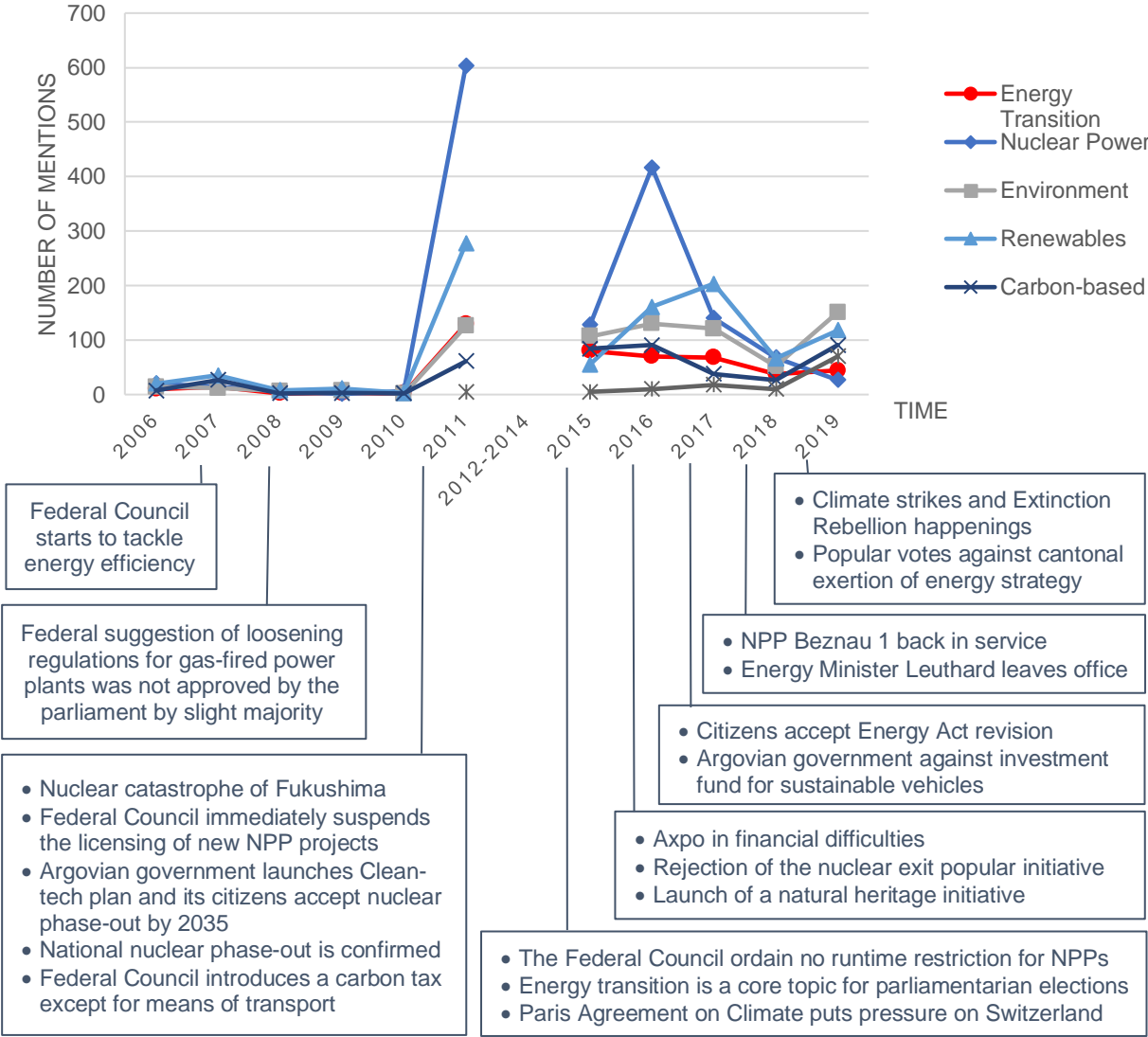
5.3.3.2 Overview and Comparison of Thematic Utterances

If a summary of the evolution of the analysed subjects had to be outlined, it would approximately resemble the graph below. This schema displays yearly medialised highlights in combination with the evolving media presence of the priorly overviewed topics. An overview of thematic controversies reviewed over the course of this chapter is available in the annexe, as well as the priorly alluded timeline of key events. It should be noted that the following representation corresponds to the yearly approximations of the thematic trends and that they do not depict fluctuations over the years. In particular, the comparatively high curve visible between

¹⁸ Doris Leuthard is the best Christian CVP politician, but she is also far from being ecological enough: her energy transition is just a small step in the right direction. Switzerland continues to emit as much CO₂ from transport as it did in 1990 - a debacle for a wealthy country that cannot be held responsible for future generations.

2015 and 2017 gives the impression that environmental discourse linked with energy transition was continuous. However, as noted in the previous subsection, the resurgence of sustainability linked themes was punctual and intense instead of progressive. As emphasised throughout this descriptive analysis, the Japanese nuclear reactor catastrophe that occurred in 2011 erupted the unprecedented concern over the dangers of radioactivity and, with it but in a diminished measure, the issues on alternative energy sources, carbon emissions and climate. Whereas the nuclear exit initiative caused turmoil in 2016, the settlement over nuclear power seems to have occurred in the aftermaths of the popular vote on the revision of the Energy Act in 2017. Since 2015, mentions of energy transition started to gradually decline. In parallel however, the discourse on renewable energy sources rose in importance. A depletion of all energy-related issues in 2018 interrupted this ascent, but the year 2019 brought a modest but evident rise in medialised presence of all of these subjects – except from the now apparently settled discussion on nuclear power.

FIGURE 6: TIMELINE OF MAJOR EVENTS AND COUNT OF THEMATIC APPEARANCES.



“Rational discussion is useful only when there is a significant base of shared assumptions.”
Noam Chomsky

6 DISCUSSION

In continuation of the descriptive results, this chapter consolidates the findings of the conducted content analysis with the objectives of the research. The first section discusses the validity or refutation of our three hypotheses and the second section is dedicated to an extensive answer to the research question of this study.

6.1 HYPOTHESES REVIEW

In order to attain a common tread guiding to the review of the research question, the hypotheses are discussed in reverse order to which they were articulated in chapter 4. Thus, the section opens with the extension of the validation of the third hypothesis regarding the frequencies of worlds of worthiness. The two following subsections respectively regard the evolution of framings and the unfolding of a converging attitude in relation to the energy transition.

6.1.1 An Allegiance to Performance

The third set of hypotheses formulated prior to the execution of this research comprehended an estimation on which worlds of worthiness would emerge the most frequently in contrast to others. As the components of these propositions were mostly confirmed in chapter 5, this subsection develops the relationships between worlds of worthiness appearing in the content analysis. Due to the nature of the justification theory, the description of these interactions applies to the entire analysed content independently of the different appearing periods.

As emphasised in the previous chapter, the industrial justification dominates the discourse around energy transition due to it encompassing a variety of value assortments relevant to this issue such as forward-looking, efficiency-indulging and knowledge-seeking purposes. This underlines how industrial values are more common in the energy transition discourse and how state authorities adopt this language as a way to legitimise their policies. It does not suggest however that the industrial world was devoid of confrontation. On the contrary, the Fukushima incident being depicted as a performance failure and climate-change as an uncontrollable force, deficiencies on the matter were abundant as well. Accordingly, discord might therefore be resolved through a model test that re-establishes order within the world with the core ideal of scientific competence in measuring future outcomes and calibrated interventions using proven technological advancements. However, in an ethical point of view, no decision over a superior and satisfying energy future can be estimated in a purely utilitarian fashion. Therefore, the inclusion of external parameters conducts to a nonconclusive industrial position without the arbitration of the other worlds.

In this context, the civic world is alternatingly the most supportive and dissenting custodian of industrial worthiness. In the face of the industrially deficient climate and nuclear crises threatening public goods and social cohesion, civically approbated government officials intervene in attempting to develop the most suitable solution given the local circumstances. Discord may occur in the event of utter pragmatism on par with the industrial understanding of not continually being in favour of the greater good. However, civic representatives are also sometimes perceived as being misguided by the sober expertise of the industrial world and are therefore controlled by civic representatives. For instance, the repeatedly suggested construction of gas-powered plants supposed to fill the energy gap is called to order by a part of the civic delegates who report their colleagues for having neglected parameters that constrain the common good in the future. Nevertheless, this reciprocal control feature of the civic world reinforces the lengthy implementation process enhancing industrial activity. In addition, the civic order is also divided in its understanding of the common good, as some civic representatives also accuse their colleagues of following their own interest instead of communitarian welfare. Therefore, due to both the divisive attitude of civil agents toward each other as well as the individualism some of them are blamed for, the civic world is doubly deficient at its core besides also being deficient according to the domestic standard of honesty.

The market and industrial worlds are more than often in concordance with each other, as the industrial value of (cost-) efficiency of resources is shared with market-oriented issues of viability, return of investment and competitiveness. Animosity might arise when other worlds of worthiness are challenged, such as civic, domestic or inspired order of references. Depending on the cases, a third world usually operates as the conciliating factor between several simultaneously confronted orders of justifications, thus achieving a compromise. For instance, the dispute between an environmentally harmful but less expensive coal manufacture and a clean but less efficient renewable energy utility might be temporarily settled down through diversion with the domestic appeal of preserving the sovereignty over the energy supply for instance.

Akin to the civic world, the domestic virtue of honesty morally oversees the expansion of other orders of references but to the difference of the civic world, domestic values of tradition often impede on the progression of the energy transition. On several occasions, the domestic worthiness is portrayed as a deficiency in order to castigate social groups, despite those people not directly using a domestic-oriented justification when stating their opinion. Typically, these verbal attacks were directed to conservative political and economic actors who intend to continue practising the same activities than before the publicly perceived crisis rather than to confront themselves with the resolution of the crisis. Therefore, the domestic order of reference is generally subjected to the inferior value in cases of clarification with other worlds of worthiness.

Of the derisory number of instances inspired values were identified, most of them are in the presence of the domestic world. Aspiring together for a vision of unaltered nature, the few oppositions they encounter come from the market and industrial world, to which a compromise is found by way of adding the civic world as a bridge between these different justifications. As stressed in the previous chapter, the rare resort to a more spirited order of reference is unfortunate in the context of energy transition due to the core change-embracing values this subject stands for.

As for the world of fame, as seldom as it appeared in the sample, it never was subject to conflicts with any other order of references. Deficiencies occurred whenever comments mentioned an omission on the part of the editorial line of the newspaper, but in default of the newspaper publishing responses to the letters the editors, these occasional interferences were never countered. To some extent and in a meta-level, these publicised opinions as objects of value correspond to an order of reference which celebrates public opinion itself. On that account, the world of fame may stand for the entire newspaper review. As the analysis material was itself a published media destined to a wider audience issuing noteworthy and meaningful articles to its public with the capacity of shaping the opinion of its readers, it is a worthy representative of all core values defining the world of fame.

6.1.2 Closing the Loop

Our second hypotheses expected a naturalisation of the frame, implying an overall convergence of the discourse toward fewer themes brought in association with energy transition as time went by. This evolution of meaning portrayal would assure a more distinct and coherent perception of the notion for the population. However, we omitted to include the first and second stage of the naturalisation process in the formulation of this hypothesis, namely the classification and the conventionalisation of the frame. These important steps comprise a wide diffusion and appropriation of the frame before the eventual diminishing and condensing of the diversity of representations of a notion. Thus, over the course of the sample analysis, we noticed two frame conventionalisations and reclassifications that occurred in two different ways.

The starting point of the newspaper sample began in 2006, an ideal situation in which the issue of energy transition was externalised by only appearing in news flashes or other asyndetic types of articles. In 2007, the issue started to be related to concerns for the climate as well as energy efficiency, particularly in the housing sector. During this period, energy transition was sometimes written in quotation marks, thus underlying a still reluctant appropriation of the notion. The next three subsequent years included the least frequent mentions of the term, as if it was falling into disuse. However, the notion of energy transition took a drastic turn as it was introduced into wider public attention starting the Fukushima accident, with national nuclear phase-out as the prime objective. From then on, energy transition was primely associated with nuclear phase-out. This period marks in our opinion the first classification and conventionalisation of the term. As the topic of nuclear hazards was propelled to one of the most urgent concerns in the media and correspondingly political agendas due to unexpected and disruptive events, the framing construction phases did not occur successively but conjointly. The discourse exclusively linked to the nuclear power issue lasted for several months until actors started to associate energy transition to other subjects such as the gap in the job market or the energy supply corollary of immediately suspending nuclear facilities.

Despite having been expeditiously determined, the understanding of energy transition was altered again, this time over a longer period and recurring to the standard construction phases of frames. This phase seems to have occurred between 2015 and 2016, starting with the heavy use of the notion of energy transition by politicians in preparation for the national parliamentary elections. In this context, the term is often brought to the table allusively in-between other political items and without elaborating more on the subject. Perhaps in consequence of

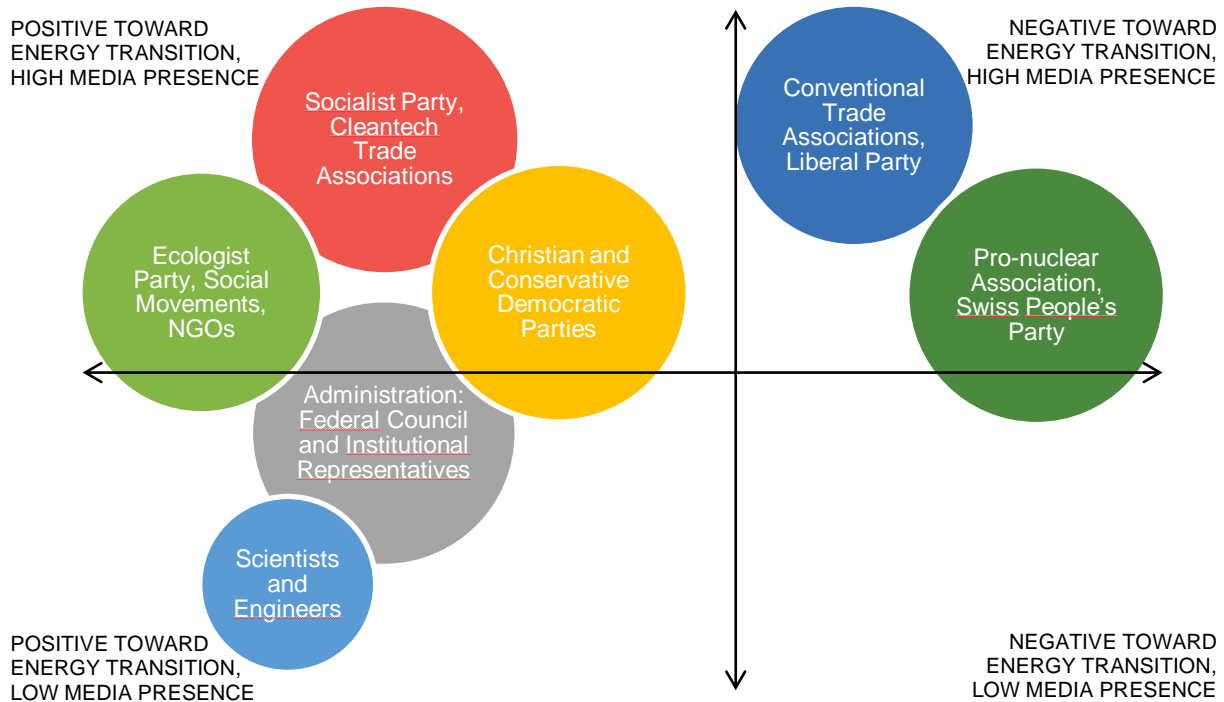
its politicisation or the imminent popular vote on the Energy Act happening the subsequent year, the word was appropriated by the wider public who wrote letters to the editors about the subject. As the discourse around energy transition was very diverse and included divergent viewpoints, we estimate this period of being representative of a frame reconventionalisation. This opened the path towards a reclassification, which appears to have occurred in 2019 as no consistent predominance of one concordance over another happened before. During one entire year, energy transition was linked to the issue of climate change and sustainability, thus coming full circle with the discourses held in 2007.

In sum, energy transition was, to the exception of 2007, almost absent from public discourse until it was abruptly but heavily correlated with nuclear phase-out. Most of the time, energy transition was shed in a positive light and corresponding frames were mainly process-oriented, focusing on planning features more than on results. With time, obstacles to an immediate closing of NPPs hindered rash action-taking. The planning of the Energy Strategy brought forward many challenges such as finding means of compensation for the suppressed energy source without jeopardising the national energy sovereignty, conceive measures to diminish energy consumption, promoting renewable energy sources, and many other stakes relevant to the energy transition. The urgency and plight of abolishing nuclear power for safety precautions were diluted in favour of genuinely tackling the intricated predicaments of the issue. By 2019, the clear majority of statements issued in relation to energy transition were directly linked to the subject of climate change. Nevertheless, we have some reservations in fully acknowledging the association between energy transition and climate change as a naturalisation process. As we understood the framing approach, the naturalisation process implies the oblivion of the origin of the first frame, which was in our case associated with nuclear power. However, the debate of nuclear power has diminished but is still occurring nowadays, and inversely, the association with climate change was briefly but evidently formulated before the rise of nuclear-related discussion and never fully disappeared from the public discourse since then. The second hypothesis is hereby only partially validated.

6.1.3 Stability Within Change

The first formulated hypothesis questioned whether an overall change of attitude occurred over the past fourteen years to the diverse actor coalitions leading them to gradually conform to the same mindset. Combining principles of isomorphism and the MLP, we were keen on discovering the origins of the incentives to change and if these changes were more institutionally induced or if sociotechnical niches drove a progression from the bottom-up. As described in the fifth chapter, we had classified the recurring actors into six types: political, administrative, industrial, associative, scientific and miscellaneous. Depending on their affiliation and positioning toward energy transition, we defined several subcategories of these actor types as actor coalitions. The political actors were spread according to their respective political parties and associative actors were divided into three groups in which NGOs and social movements counting as an ensemble, and 'conventional' trade associations were separated from cleantech industry unions. The figure below illustrates the relative position held by the different coalitions present on the discourse on energy transition.

FIGURE 7: CARTOGRAPHY OF ORGANISATIONAL FIELDS.



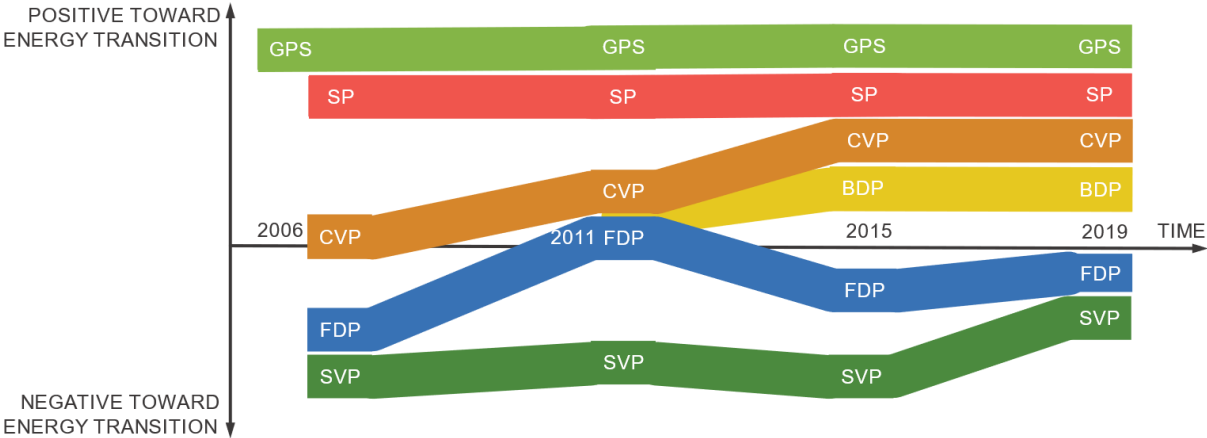
In the initial situation of 2006, the SVP, the FDP as well as conventional trade associations were situated as strong opponents to sustainable energy sources made available through newer technologies. On the other hand, the Green and Social Democratic Parties, cleantech and environmental associations, as well as administrative spokespeople, were settled as moderate to strong proponents to the potential of renewable energies and to the general *idea* of energy transition. All other actors either had mixed feelings on the issue – i.e. the CVP and medialised industrial actors, or were altogether absent from the debate at that time – i.e. scientists. The same liberal-conservative coalition notoriously advocated for the nuclear power, whereas only the GPS was situated as vehement protestor of this energy source. If a comparison on the positionings of this constellation of actors had to be undertaken between the beginning and the end of the sample, the major difference we would encounter is the clear positioning of scientists in favour of energy transition, difference revealed solely because of the non-appearance of this actor at the beginning of the analysis. On this basis, we could assume that no coalition has ‘changed sides’ in the 14 years interval, but this is without considering momentary disturbances within the coalitions as well as potential change-inducing events and institutional pressures that occurred in the meantime.

No noteworthy incident could be monitored prior to 2011 due to the few and irregular takes on energy transition in our sample. Nonetheless, Fukushima was an emblematic disruptive event that shook up the world and triggered the planning of policy measures on various instances, thus potentially reconfiguring previous actor coalitions. In Switzerland, the immediate attitude toward this catastrophe reportedly was the repositioning toward nuclear power by a fraction of its initial supporters, as was noticeable with the FDP. In the ‘energy canton’ of Aargau, the convictions disturbed by the Japanese nuclear disaster led to the close collaboration of SP and FDP to foster the development of cleantech in order to prepare for a programmed nuclear

phase-out. Thus, the actors living in closest proximity to nuclear reactors and benefiting from the local energy market were among the first in a national level to implement comparatively radical energy transition measures. To some extent, the canton forestalled the Energy Strategy 2050 by four years. However, the inner destabilisation among liberal political agents due to the upsetting nuclear disaster was ultimately temporary as no definitive change of attitude affecting the entire party was documented afterwards. This observation gives the impression of the Japanese accident being only perceived as a timely disturbance in the long term until old habits take their normal course of action. In addition, the periodical news outbreaks calling attention to climate change mitigation have little effect to the overall attitude of coalitions, as actors who were already aware remain invested – such as the SP and above all the GPS, while actors who were indifferent to the conundrum mostly stay disinterested through time. For instance, as only one unique statement uttered by the SVP shows affinity for energy transition, we cannot conclude a concrete change of perception on the part of this party.

However, a minor progression can be documented on this part, as climate change detractors slightly altered their discourse around this issue. Regarding the positioning of centre political actors who hold the power to tip the scales, the CVP progressively took a moderate turn toward accepting energy transition, together with the BDP whose ‘unique selling proposition’ was to be the sole conservative party supporting the energy transition (AZ, 10.09.2015). Thus, tacking all of these observations into consideration, we can roughly schematise some sort of an isomorphic evolution toward the acceptance of energy transition on the part of all political parties. Based on the attitude of parties in heavily medialised and polarised periods, a very simplified illustration thereof is displayed below. It should be noted that the GLP is not represented in this graphic as the party was too scarcely mentioned to deduct any change in its positioning.

FIGURE 8: SCHEMATISED PROGRESSION OF POLITICAL POSITIONINGS TOWARD ENERGY TRANSITION.



It is difficult to estimate whether the changes in perception of political actors were induced more in a coercive, mimetic or normative fashion. In a first instance, the disturbance of the status quo in 2011 led to a mimetic behavioural shift in apprehending energy transition according to an accident and ensuing measures adopted by neighbouring regions or countries, but also by mimicking the emerging civic trend of giving attention to sustainability concerns. Thereafter, a coercive change was induced by the national eagerness to introduce new legislations and strategies. Compared to these two, normative incentives brought by scientifically based

knowledge were continuous and constituted the main rationales and motives for decision-making processes together with simultaneously mimetically assimilated changes of mindsets.

Our basic presumption prior to the conducting of the empirical research was that the coercive measures applied by governmental authorities were the main triggers to changes endured by the industrial actors. However, as it was established in the last chapter, only BKW was reported to have been subjected to authoritatively inferred adjustments while Axpo remained mostly unscathed from any reproach despite being also coercively pulled toward adapting through financial difficulties and the Beznau 1 maintenance. Indeed, the first firm showed resistance to the newly imposed regulation on regards of NPPs whereas the second took matters into their own hands and was already investing in renewable energies years before the interference from the Confederation. Adhering to the organisational field theory, Axpo *intently* engaged in corporate transformations when BKW experienced a *constrained* switch into institutionally pushed conformity. With hindsight, the comparison between these two firms seems quite unbalanced as BKW was also investing in renewable technologies and joint-ventured with EWB in 2010 prior to Fukushima (Jud, 2019). These industrial actors experienced many changes over the course of these last 14 years, unlike political actors.

Building on the findings of Aykut and Evrard (2017) which contrasted French and German energy transition policies, a comparison with Switzerland appears to be relevant. France, Germany and Switzerland all implemented different measures in the aftermaths of Fukushima, but conceptual resemblances bring the three of them together. Whereas France witnessed a top-down and Germany a bottom-up semblance of a progression, Switzerland is a bit of both as the national government and small-scale local projects introduced by individual enterprises or municipalities responded to each other asynchronously. Nevertheless, Switzerland proceeded in a similar manner to France and Germany in maintaining the status-quo over that extended period. In retrospect, despite the tedious procedures that conducted to the issuing of the Energy Strategy 2050, the current political climate around energy transition does not seem to have greatly evolved since 2006 according to the general sentiments issued in letters to the editors. Indeed, attempts to change this status quo were periodically undertaken in the form of ecological taxes or green economy initiatives, but these 'shots in the dark' ultimately ended with stark disapprobation. Locations continue fighting windmill projects in their vicinities and the Mühleberg facility started its dismantlement barely two weeks prior to the year it was originally scheduled before the start of its nuclear condemnation in 2011.

This rather pessimist review should however not obstruct the progress that has been made in that direction as well as the fact that changes in favour of energy transition did indeed occur. All things considered, the Swiss path toward energy transition is a reasonable one precisely because of the time invested in establishing a balanced and continuous revision of the Energy Act according to the current situational developments. The Swiss policies were accurately managed compared to its French and German neighbours who either adhered to a clean but hazardous nuclear power or employed heavy polluting black coal as a transitory energy resource in anticipation of their emission-free energy planning. Whereas it took a tragic international event to disrupt the status quo on former energy strategy policies, the public interest on the issue led to a stark politicisation. Thereafter, there was no need for another catastrophe to occur for energy transition to remain relevant in the public discourse.

6.2 ARGUMENTATION TRAJECTORIES OF ENERGY TRANSITION

Demonstrated with our research question, the purpose of this study was to investigate the shaping and potential alteration of a common understanding of energy transition throughout the last 14 years in medialised discourse. whereas the previous section utilised each theory from the conceptual framework separately to answer to the hypotheses, this section will discuss the findings of this study by employing a combination of all three applied concepts as well as the theoretical approaches introduced in the second chapter.

6.2.1 A Strategical and Coherent Transition

Over the course of the last chapter, the focus was on the argumentative trajectories of chosen but concrete subjects in close link to energy transition. This rather short selection did however moderately include the question that appeared regularly and independently of the theme of discussion. The core point of confrontation around energy transition was constructed around sustainable energy technologies being able to foster or impede economic progress. Accordingly, this matter of discussion was mainly divided between the SP who envisioned a prosperous sustainable energy future and the FDP whose scepticism over the economic viability of yet unproven technologies hindered the approval of potential infrastructure modifications. However, the discernible discursive trajectories may go hand in hand with perhaps strategical alterations on the part of actor coalitions. As noted previously, the FDP experienced an inner conflict which opened a path to a change of mindset, whereas the SP remained consistent to their initial attitude for the entirety of these last 14 years. Nevertheless, SP being forward-looking and FDP performance-seeking, the industrial world of worthiness is solicited by both parties in different manners. Thus, a new construction of this world of reference was possible without sacrificing coherence from both parties over time. Therefore, these actors have reshaped the construction of their discourse by slightly adjusting and conforming their argumentation according to the core values of their confronting interlocutors and coherency persisted throughout all parties. The utilised justification patterns influenced each other syndetically, which in turn motioned the disputation toward compromises and settling legislations.

Correspondingly, we believe that the portrayal of energy transition as a positive force for the national market was decisive for the political prosecution of the energy strategy and the industry's increased consideration of renewable energy sources. This could only have been completed with the cooperation of all concerned entities: progressive parties led the discourse with their concern, gradually breaking through the uncertainty of liberal-conservative parties by mobilising virtuous industrial and market values dear to their political opponents. Meanwhile, a slower implementation than left parties would have perhaps preferred was the prerequisite for a more formalised energy strategy, the perceived delay being compensated with a more reasonable and complete version than what would have ensued if instantaneous measures would have been taken. In other words, energy transition was gradually perceived as an opportunity for new markets instead of a threat for existing ones. Therefore, more than a crude and unprecedented event that had radically changed societies in a completely new way, the Fukushima catastrophe should rather be perceived as an acceleration of existing mechanisms. On that regard, we entertain some doubt that the attitude toward energy transition would have

been altered as much as it did today if the Japanese nuclear reactor incident had not occurred. As Grunwald (2012) argued, the energy transition is precisely not a substitution of an old technology to a new one, but a piece of self-transformation of society. Thus, an interdependency and codetermination prevail between the issue and the concerned constellation of actors. Energy transition stems from the shift in mindsets as much as it has caused it.

6.2.2 Searching for Consensus and Plurality

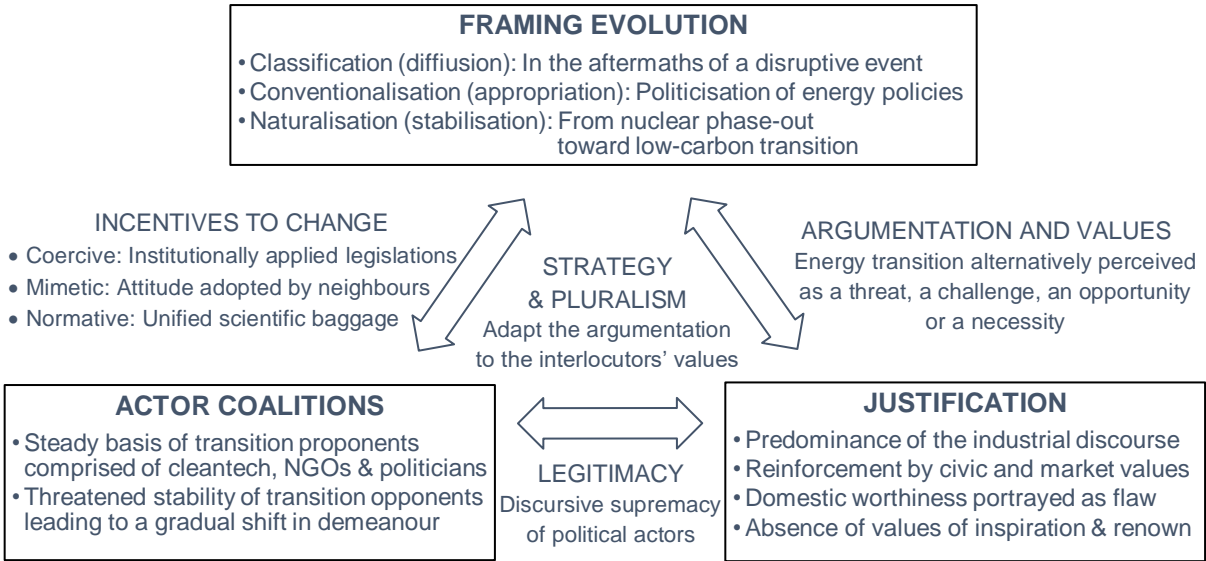
Throughout the monitored period, energy transition was mostly approved of and perceived as a chance as long as its definition remained vague. Prior to the Fukushima incident, the institutional intention to take action may rather have been the reaction to situational factors in the likes of the opening of the energy market and the measured increase in energy consumption than the public demand to renounce on an energy source and become more energy efficient. After the nuclear incident however, the collective mentality was first united and conjointly repealed against this energy source. In line with the observations of Droz et al. (2013), most involved actor groups agreed on the intent to undertake something, but disagreed on determining and taking measures effectively. However, debates over which strategy to adopt in the future occurred even among energy experts, thus generating controversy. Indeed, “if any argument can have an element of subjectivity, no objectivity can be decided” (Smith, 2019), and when experts cannot agree between themselves, it is less probable that the general public would adhere to an idea. Thus, the attempt to control risks generates more uncertainty (Beck, 1986). This impacted the overall reputation of administrations, to which trust and legitimacy were attributed. These institutions were then the target of frequent accusations for their slowness of planning and implementing statutory measures. In this context, radical initiatives promoted by the GPS and GLP arose but were soon dismissed due to the extremeness of their proposals. As the conflict between actors is set around the same object, the more their discord is standardized, the more actors agree on viewing this object as an object of dispute. Accordingly, as consensus over possible solutions is more difficult to achieve, the number of alternatives diminishes as the costs of these solutions increase (Widmer, 1997).

Nevertheless, the urge to make progress may stimulate the generation of better ideas. In the face of threat, inventiveness and resourcefulness are the drivers to avoid failure. Furthermore, one has to take account of the technological lock-ins and institutional barriers that prevail in the energy industry. Being a highly regulated field, pressures for conformity and legitimacy may arguably be higher than in less regulated industries and may create more incentives for actors to pre-emptively reach settlement on issues through self-regulation. Therefore, with time, fewer sets of solutions may have retroactively led the prior passive acceptance of reforms toward active support of new measures (Schumacher et al., 2019). Consequently, a collective change of mentality was slowly assured. In concordance with the concepts of sociotechnical embeddedness and risk society, the path toward energy transition is hurdled gradually and incrementally not in spite but precisely because of the long-term mindset necessary to adopt in face of possible alterations that may affect future bearings. In this context, the absence of discourse is the worst imaginable scenario as it discredits the very importance of the notion of energy transition. Thus, a continuous debate is necessary in order to adopt measures to the current circumstances and unprecedented perturbations that might happen on the way.

As it was noticeable with the problematic of nuclear power in the last chapter, technology is always ambivalent and its perception always depends on the way it is presented. Therefore, in place of relying on one sole technology, it seems wiser to diversify a nation’s energy portfolio. Diversification offers more flexibility and there can always be drawbacks in the predominance of one technology over another. Likewise, due to its multifaceted attributes, energy transition cannot be tackled in a fundamentalist perspective. The issue has to be understood in an ecological point of view, but also in the point of view of energy security and of corporate competitiveness (Charlez, 2019). In order to balance all three, heterogeneity and power of contestation is required via the intervention of actors with different backgrounds, different values and different solution ideas. “Behind the variation in structures and practices [...] lies diversity in how actors interpret and frame issues and the pressures associated with them” (Litrico/David, 2017). In other words, once a specific understanding of the issue is shared, the variety of logics does not impede on unifying them. Conflicting ideas enhance the generation of new ones.

In sum, despite having been present for decades before, the notion of energy transition was starkly mobilised in the media ensuing the Japanese nuclear catastrophe and has never left public discourse since compared with prior attempts to standardise the term over 2006-2007. As of now, the notion is sufficiently established in common language to be employed without the need for catastrophes or new policies to occur. Furthermore, its meaning appears to have evolved over the course of these past 14 years. Whereas ten years ago energy transition was understood as nuclear phase-out, its meaning is now approaching one of a low-carbon or even emission-free transition. The term energy transition has been therefore established in the public discourse, or in other words, collective rationality has been constructed and normalised around the notion of energy transition. This conversion took place with the interrelated responses of actor coalitions. We therefore appreciate this progression as a successful framing construction. As an attempt of summarising these findings, the figure below displays these observations embed in the discursive evolution model developed in chapter 3.1.4.

FIGURE 9: SYNTHESIS OF SENSE-MAKING PROCESSES AROUND ENERGY TRANSITION.



*“Crisis is a positive state.
One just has to remove the aftertaste of disaster.”
Max Frisch*

7 CONCLUSIONS

This chapter completes the resolution of the entire study by recapitulating the entirety of the research. Thereafter, the shortcomings of this text are laid out. Lastly, the exposition of propositions for further research concludes this chapter and thus, the study.

7.1 SUMMARY OF THE RESEARCH

This research intended to observe and describe the construction of a collective meaning around a multi-layered issue within a plurality of opinions provided by a Swiss piece of media. It attempted to monitor the change of attitude toward energy transition over 14 years through the argumentative trajectories of subjects surrounding this intricately topic. Assisted by an academic understanding of energy transition acquired by industrial, historical and sociological insights, discourses were observed through a conceptual framework comprised of the neo-institutionalist theory, the framing theory as well as the justification theory. On these bases, we conducted a content analysis on a selection of articles present in the Swiss-German regional newspaper *Aargauer Zeitung*. Throughout the analysis, we identified frequencies of appearances and justification patterns and observed the evolution of the representation of related subjects to energy transition. Upon which, several hypotheses were confirmed. First, the most recurrent order of justification employed in the discourse was future-oriented, knowledge-inducing and performance-seeking values, either supported by or confronted with community-indulging or market-oriented values. Second, the concrete appropriation of the notion of energy transition, characterised by an acute mobilisation of the term by a diversity of actors in a variety of contexts, occurred between 2015 and 2016 as the medialised discussion was highly politicised. In addition, the understanding of energy transition shifted from an association with nuclear phase-out towards a low-carbon transition. Finally, the events brought in relation to this issue impelled industrial actors to conform to new regulations and drove contending political actors to moderately alter their attitude, thus converging toward an acceptance of the energy transition. By combining these insights, we come to the result that a shared understanding of the subject, combined with a constellation of dissimilar actors, generate a progressive and favourable turn toward energy transition when a common denominator is strategically shaped between the different concerned actor coalitions. The specific case of Aargau highlights how in the face of the medialised risk of a nuclear malfunction manifested through the Fukushima disaster, the actors living in closest proximity to nuclear facilities were among the first to develop nuclear phase-out measures on a cantonal level, thus preceding national planning on that regard.

The research outcomes are in line with those of previous studies, but its new contributions are manifold. On the one hand, its structure permits a systemic understanding of energy transition

by utilising and combining interdisciplinary insights, thus facilitating the adoption of a comprehensive approach to this multifaceted research subject. Indeed, energy is a question of power in every sense of the term, including the dynamics of political power in a socioeconomic context. On the other hand, the study mobilised theoretical concepts that were to our knowledge never associated together before and merged them in order to apprehend our research subject in a systemic and discursive way. In turn, this approach permitted us to conceive new interpretations that would not have been detected in this research otherwise. Furthermore, the take-home message of this research, which involves a reconciliation between common understanding of a subject by a diversity of actors within different fields, might be insightful for many study cases to come in relation or not to the notion of energy transition. Schematically, knowing the attitude of one's interlocutor toward an issue permits to adjust one's argumentation pattern to the core values of this interlocutor, ultimately persuading them of acknowledging another point of view to their own. This last observation can prove useful in a diversity of contexts and fields. More broadly, these findings underline how politics are fundamental in an institutional and communicational point of view in regard to sociotechnical change. The inherently political aspect of the debate held over the energy transition in the public discourse opposes any assumption of a technological determinism in the matter. In other terms, values of efficiency are not predominant in concurring on upcoming infrastructural adjustments, but are complemented by other sets of qualities that may subdue the implicitly technocratic nature of the issue of energy transition.

7.2 EXTENSIVE LIMITS OF THE STUDY

There is always room for improvement and this research does not deviate from this rule. Questioning the overall representativity of the study, this section introduces the principal limits of this research. To some extent, some attributes of the criticism of this study constitute its strengths, as this unique configuration of choices has led to a specific constellation of results and other methodological and empirical alternatives would have led to other limitations.

7.2.1 The Drawbacks of a Systemic Research Approach

In default of having set a priority for a specific subtheme of energy transition, we bit off more than one can chew by tackling a very vast and complex issue overarching many interconnected aspects subjected by multi-layered constraints and comprised by a plethora of technologies. Rather than focusing on one sole technology or one sole challenge of the far-reaching concept of energy transition, the entire setup of this study was too ambitious to begin with and too sparse in the many employed theoretical approaches. In consequence, this text remains superficial and does not dig deeply into a concrete and narrow research question. Indeed, the task of detecting and analysing controversies around one sole technology may have been simpler to achieve if the focus was only on nuclear power for instance. To its defence however, this research intended to adopt a systemic approach from the get-go and, in doing so, attempted to build a holistic view of the energy transition in a given regional context. As stressed when defining the notion of energy transition in the second chapter, the research subject is

supposed to be regarded as a whole in order to obtain an overview of the many challenges that surround the issue.

Nevertheless, the descriptive review on the issue is incomplete in some instances. We could not fulfil a real systemic research as many tackled subjects were only briefly evoked and some categories of actor coalitions completely neglected, due on the one hand to their uneven appearance in the sample and, on the second hand, to a large number of articles retrieved for the analysis as well as the necessity to remain concise. In consequence of this complexity, occurrences and discourses that may have generated a change in perception among actor coalitions could not be properly monitored except for Fukushima and the few contentious political voting items. This gap is particularly perceived in regard to thematic alterations between 2017 and 2019, when less political controversies were present. Moreover, the discussed coalitions were simplified as the multiple interactions between actors were not observed. In addition, despite a theoretical approach that tackles social change, our research focalised on discourses is not equipped to judge if a behavioural change coinciding with the change argumentation has occurred over the past fifteen years. A shift of attitude over an issue does not imply a discernible shift in social practices and we are conscious that awareness alone does not lead to social change towards individual energy efficiency.

7.2.2 A Newspaper under Scrutiny

With regard to the coding method, it was unfortunate to realise that despite its straightforward theoretical conception, we perceived our tracking measure as relatively abstract, in particular, the coding of worthiness attributes. This uncertainty may have conducted to the low reliability of the analysed data. Going further back in the empirical process, the method of gathering articles based on the sole premise that one specific keyword is present in said articles represents some impediments in a text analysis as only snippets of happenings appear in the data without any apparent conclusion. Related to this predicament and on a broader scale, Litrico and David (2017) had noted that in general in news-related content analyses, as newsworthier subjects occur over the course of a debate, “a given issue may be eclipsed by new events, such that the level of debate and controversy [...] surrounding the issue may decline” without the issue achieving a settlement. In other words, we did not have access to the full story unless some extended research was undertaken. Accordingly, this predicament had resulted in the conduct of unprecedented additional research on unrecorded events in the analysis chapter, predicament not facilitated by the three years gap in the articles’ retrieval. Despite these fluctuating data inputs but on account of our systemic approach on the subject, too much content was retrieved for keeping an overview on the analysis, which made us lose track and focus on the research outcomes.

In addition to the limitation linked to the source of archival data used in this study, we relied on a single publication to track actor framing shifts over time, which arguably represents a source of potential bias. Principally, the position of the selected analysis material among a plethora of other media and social interactions is called into question, as one newspaper does not constitute the sole opinion-making support. The opinions around an issue are not only constructed according to the current situation but also from the way the media deems appropriate to relate it to its audience. Thus, we did not take into consideration the editorial line of the analysed

regional newspaper. However, Widmer comprehends a symmetry between the construction of a discourse and its implicit reader, arguing that the portrayal of the news reflects the portrayal of the relationship of citizens to those news accounts. In other words, features can be understood as a collective relationship of citizens among themselves (Widmer, 1997). In a related manner, the problematic of statements attributed to actors in the articles versus the authorship of said news articles were not evoked in the study and deserved some matter of discussion.

7.2.3 Introspection Disclosure

As the study revolved around opinion and sense-making, it would seem necessary to touch upon our own opinions regarding the research subject. Corresponding to our own political orientation on the social and progressive spectrum, this study was written with a pro-energy transition point of view. Furthermore, our own comprehension of energy transition being intrinsically associated with the issue of environmental and climate change, we unintentionally maintained the presumption that energy transition was linked with commonly named green values. Therefore, we might have been subconsciously reacting negatively towards utterings going against our own judgement, respectively reacting positively to opinions resonating with our owns. These assumptions may have appeared in the theoretical part of this study and might have affected the entire empirical process as well as the following results' analysis. The conflict of depicting topics enclosing energy transition as related with progressive political parties is therefore perpetuated in this study, notwithstanding these topics being universal and not solely linked to distinct political affiliations.

7.3 RECOMMENDATIONS FOR FURTHER WORK

Many questions remain unanswered, giving the opportunity to build new knowledge upon the findings of this study. Researches in conceptual association with ours may either take a retro-active or prospective course, some of which will be proposed here.

7.3.1 Retracing Past Steps

Beginning with the object of our study, our initial intent was to create a comprehensive mosaic of the energy transition in Switzerland through its media landscape. As a consequence of a succession of choices, we decided not to resort on the proposed discourse network analysis software due to the programming downfalls we perceived. However, this exclusion may have heavily impeded on the speed on which we analysed our data and we believe that different findings would have resulted from our analysis if we would have used this program. In that regard, not only the DNA software comes into consideration for this endeavour, but programs such as Power BI, Polinode and other data analysis tools in concordance with the particular needs of the research purpose. As computational assistance would allow analytical capacity for more data, we suggest for further research not to replicate the very same study with this analysis software, but to expand on the gained knowledge by including additional information and data to the sample. This would enable the completion of the discursive evolution on the diverse comprehensions of the energy transition as well as the multiple dynamics between actor coalitions and their utterings. Moreover, a less systematic and more random sampling

and eventually using a different typology as a theoretical foundation would also simplify data collection and interpretation with or without software enhancements. Thus, composing the data sampling on selected moments in time or only retrieving strong-opinionated letters to the editors may be appropriate in this regard. A smaller sample offers more room for the inclusion of other types of media and a comparison between them.

Furthermore, the types of media sources could be altered and expanded. Be it audio, written or audio-visual material, providing from various sources with levels of credibility as diverse as highly specialised professional articles are to the comment sections of social media, the ensuing results will remain pertinent depending on the formulation of the problem definition. The same applies to the very research subject. Holding on to the same meaning-inducing conceptual approach employed for this research, other subjects may be investigated in this same manner. Related to the notion of energy transition, the understanding of nuclear power, renewable energies, climate change and sustainable mobility could be broadened by conducting content analyses on these respective keywords. Juxtaposed with our own findings on the matter, this further study could perhaps develop a proxemic appreciation of these terms. By extension and as alluded to in the fourth chapter, the analysis can be undertaken in different locations with other territorial specificities, thus allowing a spatial and situational comparison.

Beyond slight methodological alterations to this research, we propose additional material to explore. As mentioned in the previous section, our study did not address directly whether changes in issue interpretation led to changes in social behaviour within this industry. Accordingly, we consider appropriate to extend the research within this direction and investigate the state in which companies seized the opportunity of the energy transition to change their corporate strategy. On a corporate level, further research could perform focus group interviews and recollective testimonies from employees and managers of long-established 'conventional' energy firms in the north-western region of Switzerland about the restructuring plans and other in-house changes that occurred over the past decade. Thereby, multi-scaled managerial, financial, regulatory and normative struggles should be observed as well. Utilizing a risk and change management perspective, these experiences and personal attitudes toward internal corporate transformation may be investigated with respect to several theories and organisational change models developed in that discipline. Moreover, these observations could be put in perspective with those from energy companies specialised in decentralised and renewable energy equipment such as solar panels or geothermal installations. Analysing the resulting sense-making process of these actors over the organisation they are in, it would be insightful to employ concepts derived from strategy research.

On this subject and in a more sociologically oriented line, the inclusion of the direct clients of transition-enhancing energy enterprises could also prove relevant for further research. By gathering the motives of individuals, businesses and administrations who decided to install alternative energy sources on their buildings over the past few years, one might investigate on the benefits and stakes of decentralisation in the energy system as well as the constellations of power dynamics orbiting around them. For this purpose, the mobilisation of the MLP, as well as a deeper comprehension of the regional administrative and legal requirements, might be both suitable and convenient. Further conceptual approaches are to be envisaged in any of these suggestions. Added with the theory of clusters, an interesting connection can be brought

forward with the unprecedented relationship affected citizen hold on local specialised production centres. The practice theory is fitting for investigating behavioural changes on a societal level. Back on a discursive approach, further research could analyse the constancy of argumentative patterns over time over time, investigating for instance whether sustainable discourses around energy transition are sustainable too. Utilising both concepts of framing and of the risk society, our first assumption in the matter is that, in the long run, discourse patterns that employ urgency are discredited as this strategy is most efficient and impactful in the short-term. Narratology, the valuation theory and the concept of the public sphere, not dissimilar to the applied frameworks for this study as they are also focused on the question of sense-making, may also prove compelling to utilise for further research.

7.3.2 Moving Forward

The findings of the before-mentioned research interests may lead to an overview of past processes, but may also give insights on future stakes of energy transition depending on their corresponding conceptual frameworks. Other perhaps more abstract exploratory researches that are essentially based on prospective may also be advanced. For this purpose, forward-looking studies may adopt an outer perspective and compare best practices from other regions and countries in their handling of the energy transition. For instance, with respect to the issue of polluting combustion vehicles, the French attempt of encouraging social change by increasing the fuel tax backfired as it mostly affected low-income households and led to the yellow vest movement. In contrast, the Philippines introduced a similar mechanism in which a tax is brought about for households possessing more than one car, thus targeting a segment of the population with higher income (Girault, 2019). Europe itself lags behind the United States regarding the number of investments spent on green energy, and way behind China regarding manufacturing sustainable energy appliances like solar panels and batteries (Gauthier, 2019). Taking a global perspective might improve the understanding of local conundrums and open decision-makers to new approaches toward energy transition.

Policies take an important role in shaping its meaning and value, but so do societal discourses (Blumer et al.). Thus, energy transition should be thought of as a societal development in order to secure consistency between the political field and the concerned population. “Technology futures are both the medium of a societal auto-transformative process as well as a part of the realisation of this self-transformation” (Grunwald, 2012). Therefore, it would be wise to increase transparency in the decision-making processes by improving information transfer and combat fake facts, but above all by exchanging viewpoints between society and the political sphere. By establishing community projects reuniting scientific experts, politicians, industrials and citizen, values, norms and interests are disclosed, and awareness has risen for the general public which in turn acquire a better understanding on the matters at hand. However, one should make sure to effectively include everyone, and not only supporters of the cause, in order to foster dialogue with any type of actor sensitive or not to the necessity of energy transition. In this way, factors of resistance to change can be identified and customised resolutions envisaged according to the attitude of the interlocutor. After all, the basis for building consensus is to be more pro-active in dispelling and challenging inaccuracies interfering with a harmonious common understanding.

BIBLIOGRAPHY

Academic references

- Aykut, S. C., Evrard, A. (2017). "Une transition pour que rien ne change ? changement institutionnel et dépendance au sentier dans les « transitions énergétiques » en Allemagne et en France." *Revue Internationale de Politique Comparée* 24 (1-2), 17-49. DOI: 10.3917/ripc.241-242.0017.
- Beck, U. (1986). *Risikogesellschaft. Auf dem Weg in eine andere Moderne*. Frankfurt am Main, Suhrkamp.
- Blumer, Y. B., Moser, C., Patt, A. & Seidl, R. (2015). "The precarious consensus on the importance of energy security: Contrasting views between Swiss energy users and experts". *Renewable and Sustainable Energy Reviews* 52, 927-936, DOI: 10.1016/j.rser.2015.07.081.
- Bonfadelli, H. & Friemel, T. (2011). *Medienwirkungsforschung*. 4th ed., Constance.
- Chateauraynaud, F. (2011). "Sociologie argumentative et dynamique des controverses: l'exemple de l'argument climatique dans la relance de l'énergie nucléaire en Europe". *A contrario* 16 (2), 131-150. Retrieved from: <https://www.cairn.info/revue-a-contrario-2011-2-page-131.htm>.
- Cloutier, C. & Langley, A. (2013). "The Logic of Institutional Logics: Insights From French Pragmatist Sociology". *Journal of Management Inquiry* 22(4), 360-380, DOI: 10.1177/1056492612469057
- Cornelissen, J.P. & Werner, M. D. (2014). "Putting Framing in Perspective: A Review of Framing and Frame Analysis across the Management and Organisational Literature". *The Academy of Management Annals* 8(1), 181-235, DOI: 10.1080/19416520.2014.875669.
- Crevoisier, O. (2016). "Des Alpes à l'Alberta: les ressources naturelles, tragiques ou romantiques? Préface". In: Fortin, M.-J., Chiasson, G., Flamand-Hubert, M., Fournis, Y. & L'Italien, F. (eds). *Ressources naturelles, gouvernance et collectivités*. Editions du GRIDEQ. Rimouski, Québec. V-VIII.
- Daudigeos, T. & Valiorgue, B. (2018). "On Objects and Material Devices in the Organisational Responses to Institutional Pluralism: Insights from Economies of Worth". *Management international*, 22(3), 121-128.
- DiMaggio, P.J. & Powell, W.W. (1983) "The Iron Cage Revisited: Institutional Isomorphism and Collective Rationality in Organisational Fields". *American Sociological Review* 48 (2), 147-160, DOI: 10.2307/2095101.
- Droz, Y., Miéville-Ott, V. & Forney, J. (2013). "Les crêtes du Jura Suisse à l'épreuve des éoliennes: un patrimoine menacé?". In Juhé-Beaulaton, D., Cormier-Salem, M., de Robert, P., & Roussel, B. (Eds.), *Effervescence patrimoniale au Sud : Entre nature et société*, 147-167. IRD Éditions. doi :10.4000/books.irdeditions.8824.
- Entman, R. (1993). "Framing: Toward Clarification of a Fractured Paradigm". *Journal of Communication* 43(4), 51-58, DOI: 10.1111/j.1460-2466.1993.tb01304.x.

- Evrard, A. (2014). "Les énergies renouvelables et l'électricité: À propos d'un conflit entre un secteur et une alternative de politique publique". *Écologie & politique*, 49 (2), 67-80. DOI:10.3917/ecopo.049.0067.
- Frei, F. E. (2018). *Incumbents in The Energy Transition: How Electric Facilities Adapt To Their Changing Business Environment*. Doctoral dissertation, Federal Institute of Technology (ETH) Zurich.
- Geels, F. W. (2018). "Disruption and low-carbon system transformation: Progress and new challenges in socio-technical transitions research and the Multi-Level Perspective". *Energy Research & Social Science* 37, 224–231. DOI: 10.1016/j.erss.2017.10.010.
- Geels, F. W. (2005). "The Dynamics of Transitions in Socio-technical Systems: A Multi-level Analysis of the Transition Pathway from Horse-drawn Carriages to Automobiles (1860–1930)". *Technology Analysis & Strategic Management* 17 (4), 445–476. DOI: 10.1080=09537320500357319.
- Godard, O. (2004). "De la pluralité des ordres – Les problèmes d'environnement et de développement durable à la lumière de la théorie de la justification". *Géographie, Économie, Société* 6, 303–330. DOI: 10.3166/ges.6.303-330.
- Grübler, A., Wilson, C. & Nemet, G. (2016). "Apples, oranges, and consistent comparisons of the temporal dynamics of energy transitions". *Energy Research & Social Science* 22, 18-25. DOI: 10.1016/j.erss.2016.08.015.
- Grunwald, A. (2012). *Technikzukünfte als Medium von Zukunftsdebatten und Technikgestaltung*. KIT Scientific Publishing, Karlsruhe.
- Hasse, R. (2012). "Institutionskonzepte in kommunikationswissenschaftlicher Perspektive". Künlzer, M. et al. (eds.). *Medien als Institution und Organisationen. Institutionalistische Ansätze in der Publizistik- und Kommunikationswissenschaft*. Baden-Baden: Nomos, 43-62.
- Hoffman, A. (1999). "Institutional Evolution and Change: Environmentalism and the U.S. Chemical Industry". *The Academy of Management Journal* 42(4), 351-371. DOI: 10.2307/257008.
- Hoffman, A. J., & Ventresca, M. J. (2002). *Organisations, Policy and the Natural Environment: Institutional and Strategic Perspectives*. Stanford University Press, California.
- Huguenin, A. (2016). "Transition énergétique et territoire: une approche par le «milieu valueur»". *Géographie, Économie, Société* 19, 33-53, DOI: 10.3166/ges.19.2017.0002.
- Isoaho, K. & Karhunmaa, K. (2019) "A critical review of discursive approaches in energy transitions". *Energy Policy* 128, 930-942, DOI: 10.1016/j.enpol.2019.01.043.
- Kohring, M. & Potthoff, M. (2014). "Die Berücksichtigung von Kohärenz in der empirischen Analyse textueller Frames". In: Marcinkowski, F. (ed.). *Framing als politischer Prozess: Beiträge zum Deutungskampf in der politischen Kommunikation*. Baden-Baden: Nomos. 29-44.
- Lafaye, C. & Thévenot, L. (1993). "Une justification écologique? Conflits dans l'aménagement de la nature". *Revue française de sociologie* 34 (4), 495-524.
- Leifeld, P. & Haunss, S. (2012). "Political discourse networks and the conflict over software patents in Europe". *European Journal of Political Research* 51, 382-409. DOI: 10.1111/j.1475-6765.2011.02003.x.

- Leifeld, P. (2010). "Political Discourse Networks - The missing link in the study of policy-oriented discourse". Paper to be presented at the workshop "Ideas, policy design and policy instruments: casting light on the missing link", ECPR Joint Sessions, Münster.
- Livian, Y.-F. & Herreros, G. (1994). "L'apport des économies de la grandeur : Une nouvelle grille d'analyse des organisations ?", *Revue française de gestion* 101, 43-59.
- Litrico, J.-B. & David, R. J. (2017) "The Evolution of Issue Interpretation Within Organisational Fields: Actor Positions, Framing Trajectories, and Field Settlement". *Academy of Management Journal* 60 (3), 986-1015. DOI: 10.5465/amj.2013.0156.
- Lovins, A. (1976). "Energy Strategy: The Road not Taken". *Foreign Affairs* 55 (1). Retrieved from: <https://www.foreignaffairs.com/articles/united-states/1976-10-01/energy-strategy-road-not-taken>.
- Marcinkowski, F. (2014). "Framing als politischer Prozess: Eine Einleitung". In: *Framing als politischer Prozess: Beiträge zum Deutungskampf in der politischen Kommunikation*. Baden-Baden. Nomos. 7-16.
- Puppis, M., Schenk, M. & Hofstetter, B. (2017). *Medien und Medienmacht*. Vdf Hochschulverlag AG, ETH Zürich.
- Raupp, J. & Völker, D. (2014). "Was ist strategisch am strategischen Framing? Eine Untersuchung zur Gestaltung von Frame-Elementen am Beispiel der Regierungskommunikation in der Finanzkrise". In: Marcinkowski, F. (ed.). *Framing als politischer Prozess: Beiträge zum Deutungskampf in der politischen Kommunikation*. Baden-Baden: Nomos. 127-142.
- Rip, A. and R. Kemp (1998), 'Technological change', in: S. Rayner and E. L. Malone, eds., *Human choice and climate change: resources and technology*, Battelle Press, Columbus, 327-399.
- Rothe, D. (2014). "Energy for the masses? Exploring the political logics behind the Desertec vision". *Journal of International Relations and Development*, 1-28.
- Rühl, C., Appleby, P., Fennema, J., Naumov, A. & Schaffer, M. (2012). "Economic development and the demand for energy: A historical perspective on the next 20 years". *Energy Policy* 50, 109-116. DOI: 10.1016/j.enpol.2012.07.039.
- Schumacher, K., Krones, F., McKenna, R., & Schultmann, F. (2019). "Public acceptance of renewable energies and energy autonomy: A comparative study in the French, German and Swiss Upper Rhine region". *Energy Policy* 126, 315-332, DOI: 10.1016/j.enpol.2018.11.032.
- Sovacool, B. K. (2015). "How long will it take? Conceptualizing the temporal dynamics of energy transitions". *Energy Research & Social Science* 13, 202-215. DOI: 10.1016/j.erss.2015.12.020.
- Teufel, S., Hertig, Y., Gstrein, M., Teufel, B. (2016). "Crowd Energy. Le concept de coopération énergétique du futur pour les habitats intelligents". *Bulletin* 2016/12, 31-34.
- Timms, P., Tight, M. & Watling, D. (2014). "Imagineering mobility: constructing utopias for future urban transport". *Environment and Planning A* 46 (1), 78-93. DOI: 10.1068/a45669.
- Vidal, O. (2018). *Mineral Resources and Energy. Future Stakes in Energy Transition*. London. ISTE Press Ltd.

Vuille, F., Favrat, D. & Erkman, S. (2015). *Comprendre la transition énergétique. 100 questions brûlantes, 100 réponses la tête froide*. Lausanne. Presses polytechnique et universitaires romandes, coll. Le savoir suisse.

Widmer, J. (1997). "Das Drogenproblem als Öffentliches Problem". Widmer, J., Boller, B. & Coray, R. (ed.) *Drogen im Spannungsfeld der Öffentlichkeit. Logik der Medien und Institutionen*. Helbing & Lichtenhahn Verlag, Basel. 9-37.

Ziegler, A. (2019). "The Relevance of Attitudinal Factors for the Acceptance of Energy Policy Measures: A Microeconomic Analysis". *Ecological Economics* 157, 129-140, doi: 10.1016/j.ecolecon.2018.11.001.

Commissioned Reports and Specialized Press Articles

Bühlmann, C. (2007). "Le développement de l'arme atomique en Suisse – Bref tour d'horizon rédigé dans le cadre des mystères de l'UNIL 2007". Retrieved from: <https://www2.unil.ch/mysteres/img07/bombe.pdf>.

Liesch, R. & Stadelmann, S. (2018). "Die kommunale Energiepolitik in den Schweizer Gemeinden. Erhebung 2017 zur Energiepolitik der Energiestädte und Nicht- Energiestädte mit über 2000 Einwohnern." EnergieSchweiz Final Report. Retrieved from: https://www.local-energy.swiss/dam/jcr:b7f8ec2a-8550-4ea7-a84c-6415e0c9fe94/Die_kommunale_Energiepolitik_in_der_Schweizer_Gemeinden_-_Erhebung_2017.pdf.

Teufel, S., Hertig, Y., Gstrein, M., Teufel, B. (2016) "Crowd Energy. Le concept de coopération énergétique du futur pour les habitats intelligents". *Bulletin* 2016/12, 31-34.

Verband Schweizerischer Elektrizitätsunternehmen VSE (2018). "Gaskombikraftwerk (GuD)". Basis Knowledge Document. Retrieved from: <https://www.strom.ch/de/media/6434/>.

Attended Conferences

Charlez, P. (2019). "La croissance verte est-elle une réalité ou une utopie?". Public conference given at the Federal Institute of Technology in Lausanne the 3rd of April 2019. Rediffusion partly available at: <https://youtu.be/81pBm2B2ODc>.

Gauthier, J.-M. (2019). "Energy Transition: The cost of a new revolution in Europe". Conference given at the University of Zurich the 21st of March 2019. Rediffusion available at: <https://fvoec.ch/oectalk/>.

Girault, H. (2019). "Hydrocarbures ou hydrogènes ? L'avenir de l'énergie se joue maintenant". Public conference given at the Federal Institute of Technology in Lausanne the 3rd of April 2019. Rediffusion partly available at: https://youtu.be/n4_5qdu711k.

Smith, J. (2019). "Sense and Sustainability: How do we know we are making the right choices?". *Fourth Basel Sustainability Forum* given at the University of Basel the 3rd of June 2019.

Steinberger, J. (2018). "Sustainable consumption through the lens of planetary boundaries and human well-being: a Living Well Within Limits approach". Conference given as part of the course "Sustainable consumption and social innovation" at the University of Geneva the 8th of October 2018.

Federal and Cantonal Publications

- Federal Chancellery FCh (2017). "Volksabstimmung vom 21.05.2017: Vorlage Nr. 612, Energiegesetz (EnG) vom 30.09.2016. Resultate in den Kantonen". Retrieved from: <https://www.bk.admin.ch/ch/d/pore/va/20170521/can612.html#>
- Federal Council (2017) "Popular vote on 21 Mai 2017: Energy Act (EnA)". Retrieved from: [https://www.admin.ch/gov/en/start/documentation/votes/Popular vote on 21 Mai 2017/Energy-Act.html](https://www.admin.ch/gov/en/start/documentation/votes/Popular+vote+on+21+Mai+2017/Energy-Act.html).
- Federal Statistical Office FSO (2019a). "Energie: Panorama". Retrieved from: <https://www.bfs.admin.ch/bfs/en/home/statistics/energy.assetdetail.7846597.html>.
- Federal Statistical Office FSO (2019b). "Mobilität und Verkehr". Pocket Statistics 2019. Neuchâtel. Retrieved from: <https://www.swissstat.bfs.admin.ch/collection/ch.admin.bfs.swissstat.de.issue19118361900>.
- Kanton Aargau (2019). "Energie". Department Bau, Verkehr und Umwelt. Retrieved from: <https://www.ag.ch/de/bvu/energie/energieversorgung/energieversorgung.jsp>.
- Kanton Bern (2011). "Abstimmungsergebnisse 2011". *Kanton Bern*. Retrieved from: https://www.sta.be.ch/sta/de/index/wahlen-abstimmungen/wahlen-abstimmungen/abstimmungen/ergebnisse_abstimmungen/2011.html.
- Swiss Federal Nuclear Safety Inspectorate ENSI (2011). "ENSI erteilt Freigaben für Arbeiten an der Kühlwasserversorgung des KKW Mühleberg". Retrieved from: <https://www.ensi.ch/de/2011/08/23/ensi-erteilt-freigaben-fuer-arbeiten-an-der-kuhlwasserversorgung-des-kkw-muehleberg/>.
- Swiss Federal Office of Energy SFOE (2018). "Energy Strategy 2050". Retrieved from: <http://www.bfe.admin.ch/energiestrategie2050/index.html?lang=en>.

Websites and audio-visual material

- Beck, U. (2012). "Living in and coping with world risk society". 42nd St. Gallen Symposium. Retrieved from: <https://youtu.be/PeKiD5JLGIE>.
- BKW (2019). "So legen wir unser Kernkraftwerk still". Kernkraftwerk Mühleberg, Unsere Infrastruktur, BKW. Retrieved from: <https://www.bkw.ch/de/ueber-bkw/unsere-infrastruktur/kernkraftwerk-muehleberg/stilllegung/uebersicht/>.
- Dudovskiy, J. (2018). "Inductive Approach (Inductive Reasoning)". *Research Methodology*. Retrieved from: <https://research-methodology.net/research-methodology/research-approach/inductive-approach-2/>.
- Dow Jones Factiva (2019). "Factiva: Overview". Retrieved from: <https://www.dow-jones.com/products/factiva/>.
- Google Trends (2019). "Explore - Energy Transition (Topic) Web Search (Switzerland)". Retrieved from: <https://trends.google.com/trends/explore?date=2006-01-01%202019-01-06&geo=CH&q=%2Fm%2F0j9np94>.
- Jancovici, J. (2019). "De l'urgence de se remettre à l'endroit sur les questions d'énergie-climat". *Les Rendez-vous des Futurs*. Retrieved from: <https://www.rendezvousdesfuturs.com/emissions/de-lurgence-de-se-remettre-a-lendroit-questions-denergie-climat/>.

- Jenden, J., Lloyd, E., Stenhouse, K., Yyelland, B., & Donev, J. (2019). "Renewable and sustainable energy". Energy Education. University of Calgary. Retrieved from: https://energyeducation.ca/encyclopedia/Renewable_and_sustainable_energy [03.02.2019].
- Jud, M. (2019). "Chronik der Schweiz. Die wichtigsten Ereignisse in der Schweiz und international". Retrieved from: <http://chronik.geschichte-schweiz.ch/>.
- Leifeld, P. (2019). Software: Discourse Network Analyser (DNA). Retrieved from: <https://www.philipleifeld.com/software/software.html> [08.02.2019].
- Kaiser, P. (2017) "Stauwerke". *Historisches Lexikon der Schweiz*. Retrieved from: <https://hls-dhs-dss.ch/de/articles/007853/2017-03-09/>.
- Marek, D. (2014). "Energie". *Historisches Lexikon der Schweiz*. Retrieved from: <https://hls-dhs-dss.ch/de/articles/026220/2006-10-23/>.
- Marek, D. (2012a). "Energiepolitik". *Historisches Lexikon der Schweiz*. Retrieved from: <https://hls-dhs-dss.ch/de/articles/013794/2012-08-16/>.
- Marek, D. (2012b). "Sonnenenergie". *Historisches Lexikon der Schweiz*. Retrieved from: <https://hls-dhs-dss.ch/de/articles/027601/2012-11-06/>.
- Politnetz (2011). "Kernkraftwerk Mühleberg: Ersatz des alten Kraftwerks". *Politnetz*. Volksabstimmungen Kanton Bern. Retrieved from: www.politnetz.ch/abstimmungen/2011-02-13/70/kernkraftwerk-muehleberg.
- Swissgrid (2015). "Le réseau électrique de demain". Round Table. Discussion on power grid of the future at EPFL. Retrieved from: <https://www.swissgrid.ch/en/home/about-us/newsroom/newsfeed/20150602-01.html>.
- World Economic Forum WEF (2019). "Realizing the Energy Transition". *World Economic Forum Annual Meeting*. Retrieved from: <https://www.weforum.org/events/world-economic-forum-annual-meeting/sessions/realizing-the-energy-transition>.

ANNEXE

TABLE 4: SUMMARY OF ATTRIBUTES OF EACH 'WORLD OF WORTHINESS'. CLOUTIER & LANGLEY (2013).

<i>World</i>	<i>Inspired</i>	<i>Domestic</i>	<i>Fame</i>	<i>Civic</i>	<i>Market</i>	<i>Industrial</i>
Higher common principle	Inspiration	Tradition, hierarchy	Public opinion	Civic duty, collectivity	Competition	Efficiency, performance
Characteristics						
State of worthiness	Bizarre, different, original, spontaneous	Benevolent, well-bred, wise, sensible	Celebrity, prestige	Representative, free, official, statutory	Desirable, valuable, wealthy	Effective, functional, dependable
State of deficiency	Habit, routine, 'reality'	Impoliteness, inconsiderateness, treason, vulgarity	Banal, unknown	Division, isolation, individualism	Loss, poverty	Amateurism, lack of productivity
Relation of worth	Independence, uniqueness	Respectability, responsibility, authority, honour	Recognition, notoriety, visibility	Membership, delegation	Possession	Mastery
Actions and behaviours						
Human dignity	Love, passion, creativity	Comfort, ease, judgement	Well known, reputed, visible, persuasive	Freedom, democracy, civil rights	Self-interest, desire, consumption	Work, energy, activities
Investment formula	Risk, detour, calling into question	Rejection of selfishness, duty, obligation	Abandonment of privacy	Renunciation of personal interest, solidarity, struggle	Opportunism	Progress, effort, investment
Material manifestations						
List of subjects	Artist, child, muse	Father, king, superiors, chief	Star, fans, spokesperson, thought leader	Elected officials, the party, members representatives	Competitor, client, buyer, seller	Professionals, experts, specialists
List of objects	Spirit, body, dream, the unconscious	Good manners, etiquette, titles, rank, gifts	Media, brand, campaign, message	Elections, law, committee, lists, code, decrees	Wealth, luxury, objects	Tools, resources, methods, plans, norms, tasks
Harmonious figures of the natural order	The imaginary, the unconscious	The home, the family, customs, convention, principles	Public image, the audience	The state, democracy, electorate, parliament	The market	The system
Model test	Adventure, quest, journey	Family ceremonies, marriage	Presentation, press conference, launch	Demonstration in favour of a moral cause, assembly	Deal, transaction, contract	Test, control, launch

FIGURE 10: RESEARCH INTEREST OF ENERGY TRANSITION IN SWITZERLAND (GOOGLE TRENDS, 2019).



TABLE 5: LIST OF ALL RETRIEVED NEWSPAPER ARTICLES AND THEIR ANALYSIS STATUS.

Year	Month	Day	No.	Title	Words	Status
2006	Feb	4	1	Freude und Wärme in den Alltag bringen	1'804	Partially Coded
	Apr	21	2	Zu wenig im Gepäck	233	Coded
	May	6	3	Stemmarsch im Gedenken an die Katastrophe von Tschernobyl	128	Coded
		8	4	«Merci, Mami und Papi, merci alli»	740	Coded
			5	«Lasst den Sonnenschein herein»	376	Coded
			6	Inland «Besprechung» mit Papst Benedikt XVI.	1'307	Partially Coded
	Oct	16	7	Mit Sonnenkraft bis nach New York	195	Coded
	Dec	23	8	Natur drängt zur Sonne	588	Coded
			9	Inland Lukasevangelium auf Tschukschisch	735	Partially Coded
2007	Jan	23	10	Energiezukunft, Folge 2	401	Coded
		24	11	Bush von Feinden umzingelt	638	Dismissed
	Feb	22	12	Vernünftig oder verpasste Chance?	292	Coded
			13	Bundesratsparteien: Mehrheitlich positiv	467	Coded
	Mar	9	14	Basler für Wisenberg	263	Partially Coded
		17	15	«CO ₂ -Ausstoss war kein Thema»	678	Coded
			16	17	Letztes Wort beim Volk	530
			17	Noch immer nicht befriedigend gelöst	1'951	Partially Coded
	May	5	18	Schnelles Handeln notwendig	658	Coded
		10	19	Polizei schnappt junge Vandalen	411	Partially Coded
	Jun	9	20	Bad Zurzach Blutspenden	269	Partially Coded
		14	21	Und die Verbraucher?	235	Coded
	Aug	30	22	«Nicht zurück in die Höhle»	1'182	Coded
	Sep	14	23	Holz, Biogas und Sonne	472	Coded
	Oct	21	24	Ein neues KKW braucht es noch. Eines.	440	Coded
Nov	17	25	Das Buch von Keckeis	406	Partially Coded	
2008	Jan	19	26	«Aufbruchstimmung herrscht weiterhin»	421	Dismissed
	Oct	30	27	Bundesrat lockert regeln	398	Coded
	Dec	4	28	Der lange Weg zum Atomausstieg	711	Coded
		17	29	Peter Scholer ist ein Mann, der immer wieder Zeichen setzt	355	Coded
2009	Feb	24	30	«Oberste Priorität hat die Energiewende»	1,238	Coded
	Mar	10	31	«SP-Politik klarer unter Leute bringen»	1,736	Dismissed
		20	32	Noch mehr Zahlen	681	Coded
	Jul	8	33	Von blauem Himmel bis stark bewölkt	561	Coded
		11	34	Kommt die Energiewende auch im Fricktal?	496	Coded
Oct	28	35	Der «Erdölrausch» ist vorbei - Zeit für eine Energiewende	370	Coded	
2010	Nov	29	36	Stadt Bern wählt langsamen Ausstieg	490	Coded
	Dec	14	37	Damit der Schweiz der «Pfuus» nicht ausgeht	369	Coded
2011	Mar	15	38	Atomkraftwerke sind nicht beherrschbar	511	Coded
			39	Zwischenstopp oder der Anfang vom AKW-Ende?	336	Coded
		17	40	Grüne Lebern: Glatz-Böni nominiert	92	Dismissed
			41	Raus aus dem Atom-Wahnsinn	557	Partially Coded
			42	Atomausstieg wird mehrheitsfähig	679	Coded
		22	43	Endstation und Neubeginn	442	Coded
			44	Sonnige Zeiten für Meyer Burger	517	Coded
		23	45	Fessenheim ist unerwünscht	228	Coded
			46	Die Zeit ist endgültig reif für Grün	590	Coded
	24	47	Höhere Bussen für AKW-Betreiber gefordert	305	Coded	
	28	48	Maulkorb	312	Dismissed	
	29	49	Blanker Hohn	332	Partially Coded	
	Apr	8	50	«Die Wende ist möglich und nötig»	344	Coded
		11	51	«Energiegesetz ist Einstieg in Energiewende»	297	Coded
		14	52	Grüngebühr abschaffen	202	Coded
		53	Nein zur jungfreisinnigen Energiewende	458	Coded	
		54	Kaiseraugst: Wirkung überschätzt	123	Coded	
		55	Lieber Visionäre als Wendehälse	568	Partially Coded	
		56	Ausnahmetalente nicht mehr als nötig stressen	542	Partially Coded	
May	9	57	Energie ist auch in der Schweiz knapp	549	Coded	
	10	58	Alstom: Da waren es noch 190 Stellen	516	Coded	
	18	59	Wirtschaft gegen raschen Atomausstieg	481	Coded	
	21	60	Alternativ, aber auch viel fossil	426	Coded	
	25	61	Einstieg in den Ausstieg jetzt	597	Coded	
	62	Kapitän auf einem untergehenden Dampfer	309	Coded		
	27	63	Gas-Kombis: Besser als ihr Ruf	580	Coded	

	28	64	Jeder Generation ihren Super-GAU? – Nein Danke	449	Coded
	31	65	Energiesparen	310	Coded
		66	«Ich werde sicher nicht Ja stimmen»	508	Coded
		67	Atom-Aus: Aargauer CVPLer lassen Leuthard im Stich	238	Coded
		68	Chance für die Schweiz!	329	Coded
Jun	7	69	Nationalrat hat fünf Stunden Zeit zur Energiewende	430	Coded
		70	Umweltfreundlich und trotzdem reich	302	Coded
	9	71	Grosser Rat verschiebt Ausstiegsdebatte	481	Coded
	10	72	Merkel erklärt ihre Wende	410	Coded
	11	73	Ständeräte wollen raschen Entscheid	390	Coded
	14	74	Solaranlagen stören weniger als das Restrisiko der AKW	526	Partially Coded
	15	75	Techniker sind auf dem Arbeitsmarkt begehrt	259	Coded
	16	76	Wirbelkraftwerke: noch nicht vom Tisch	129	Coded
		77	«Wenn die Schweiz demonstrieren kann, dass der Umstieg klappt, ist das ein starkes Signal»	2'115	Coded
	17	78	Einstieg in atomfreie Energie-Zukunft	500	Coded
	18	79	«Der Flughafen ist nicht zu den Bürgern gezogen»	1'149	Dismissed
		80	Die Plattform für die Energiewende	440	Coded
		81	Aargau soll Taktgeber werden	199	Coded
	21	82	Auch CKW von Börse nehmen	154	Coded
	23	83	Keine Zeit zur Diskussion über Atom-Ausstieg	463	Coded
	24	84	Holzhaus dient als Musterbeispiel	90	Coded
		85	Hier kommt der Strom nicht vom Atomkraftwerk	588	Coded
Jul	2	86	Nein zum Ausstieg kostet Stimmen	634	Coded
	4	87	Stromverbrauch an das Angebot anpassen	608	Partially Coded
	7	88	Brugg Zehnte Berner-Suppe à la Max Chopard-Acklin	1'656	Dismissed
	9	89	«Ein Steuersystem mit immer mehr Abzügen läuft gegen die Wand»	2'108	Dismissed
		90	Gegensteuer geben, solange es noch Zeit ist!	507	Partially Coded
	12	91	Die ökologische Steuerreform ist notwendig	289	Coded
	28	92	Sicherheit vorgegaukelt	286	Partially Coded
Aug	4	93	FDP ist realistisch und verantwortungsbewusst	468	Partially Coded
	11	94	«Solaranlagen auf alle Flachdächer»	523	Coded
		95	«Ich will die ohne Stimme vertreten»	152	Dismissed
	12	96	Kein offizielles Thema an der Cleantech-Konferenz war der starke Franken.	99	Coded
	13	97	Parteien bleiben bei ihren Wahlkampf-Themen	578	Dismissed
	17	98	Energiewende statt Beznau 3	244	Coded
	18	99	Jetzt zählt jede Stimme	638	Partially Coded
		100	Das Selbstbewusstsein der Favoritin	495	Partially Coded
	23	101	Bewilligung für Solar vereinfachen	204	Coded
		102	Stromkonzerne stehen vor Schrumpfkur	792	Coded
	24	103	EBL gibt Gas von 100 auf 1000	423	Coded
	27	104	Kleine Stromversorger gefährden grosse Energiekonzerne	410	Coded
		105	«Zu teuer für Mieter und Hausbesitzer»	328	Coded
	29	106	Präsidentin könnte Ausstieg besiegeln	881	Coded
	30	107	Max Chopard, SP: Jahr der Energiewende	295	Coded
Sep	2	108	Bauern wollen viel Strom produzieren	291	Coded
		109	Es braucht klare Signale; Ständeräte schwächen Atomausstieg ab	347	Coded
	3	110	Wie im Kindergarten	475	Partially Coded
		111	Billig – aber unbezahlbar	239	Coded
	6	112	Die Schweiz verschläft ihre Chancen	581	Coded
		113	Schweizer Solarspiesse zu kurz	183	Coded
	8	114	Der Wechselkurs bewegt die Politiker, der Atomausstieg das Publikum	1'196	Dismissed
		115	Würgt der Kanton Lindenberg-Windenergie ab?	352	Coded
	10	116	«SP steht unter Zwang»	346	Dismissed
	12	117	Die Grünen wollen in den Bundesrat und fordern Atomausstieg	261	Coded
	13	118	Das Energiestadt-Label soll wieder her	339	Coded
		119	Swisscleantech will runden Tisch zu Wasserkraft	256	Coded
	14	120	«Herr Balmer blufft tatsächlich»	308	Dismissed
	15	121	Marco Arni, GLP: Tapferes Schneiderin	295	Coded
		122	KV Baden am Aargauer Sporttag für Berufslernende	1'139	Partially Coded
		123	Energiewende ja – aber mit wem?	420	Coded
	16	124	Künftig Strom aus der Wüste?	527	Coded
		125	Richtige Politik für die Zukunft der Schweiz	515	Partially Coded
		126	«Unsere Zukunft braucht mehr Wasserkraft»	469	Coded
		127	Richtige Politik für die Zukunft der Schweiz	515	Coded
	17	128	Wie ein Phönix aus der Atom-Asche	76	Coded
		129	Es wird nicht einfach, wir dürfen keine Zeit verlieren	239	Coded

	19	130	Ab wann weht genug Wind für Strom?	623	Coded	
		131	Tausende bestaunen das neue Wasserkraftwerk	217	Coded	
	21	132	Etwas weniger Gegenwind	230	Dismissed	
		133	«Ich betreibe keine Effekthascherei»	373	Dismissed	
	22	134	Wie gestaltet das Baselbiet die Energiewende?	472	Dismissed	
		135	Baden «Wunderbar Wildes aus dem Wald»	1'006	Partially Coded	
	23	136	Nationalratsanwärter wollen Junge überzeugen	392	Coded	
		137	Wirtschaft und Umwelt: Ich will beides!	316	Coded	
		138	Eine Notwendigkeit: Mehr Rückwind für Windstrom	242	Coded	
	27	139	Kantonsrat will AKW-Gesuch zurückziehen	252	Dismissed	
	28	140	«Ich glaube an die Hilfe zur Selbsthilfe»	380	Coded	
	29	141	Atomausstieg kommt rasch voran	182	Coded	
		142	Ständerat sagt Ja zum Ausstieg aus der Atomenergie	203	Dismissed	
	30	143	Ständerat Rolf Büttiker ist jetzt gefordert	523	Dismissed	
Oct	1	144	«Der Ausstieg ist ein guter Weg, trotz Risiken»	3'049	Coded	
	3	145	Technologiewende statt Energiewende	325	Partially Coded	
	5	146	Das Gerüst steht, der Umbau kann beginnen!	281	Dismissed	
		147	Verkehr, Wachstum, Integration	900	Dismissed	
	6	148	«Wollen zehn Prozent Wähleranteil»	246	Partially Coded	
		149	Israel will keinen Palästinenserstaat zulassen	329	Partially Coded	
	7	150	Rot-grüne Diktatur?	719	Coded	
	10	151	Gesunde Finanzen und saubere Energie als Chance	362	Coded	
		152	Thomas Leitlein: «Aargau verschläft die Energiewende»	197	Dismissed	
	15	153	«Wir sind sicher, dass wir unsere Sitze halten»	1'335	Dismissed	
	17	154	«Die Schweiz braucht eine starke Mitte»	138	Partially Coded	
	18	155	Energiewende ins Sicht!	520	Dismissed	
	24	156	«Ich hatte keine grossen Sorgen»	205	Coded	
	25	157	«Sparen reicht nicht, verzichten gehört dazu»	1'018	Coded	
	28	158	Nominiert dank Fukushima	306	Dismissed	
	29	159	Grosse Wahlqual im Festsaal	454	Coded	
Nov	4	160	Neues Infocenter für die Gäste des Kraftwerks	338	Coded	
		161	Energiekonzept der Stadt wird vergoldet	449	Coded	
	9	162	AKW-Planungsleiche modert weiter	585	Coded	
	10	163	Atomausstieg spaltet Umweltschutz	483	Coded	
	11	164	So kann das Land viel Energie sparen	546	Dismissed	
	12	165	Wirtschaftsrisiken überlagern die Atomfrage	75	Coded	
		166	Hoffnung auf eine Mehrheit	259	Coded	
		167	Grundlage für bessere Energiezukunft	645	Coded	
		168	«Jetzt muss die Politik eine Strategie festlegen»	1'055	Dismissed	
		169	Diener hat «mit derartigen Angriffen» gerechnet	413	Coded	
	15	170	Mehrheit für Atomausstieg im Aarauer Einwohnerrat	254	Coded	
	16	171	Energiewende: So wurde abgestimmt	218	Coded	
		172	Atomausstieg wird auch noch Juristenfutter	359	Dismissed	
	17	173	Leuggern; Das Spiel im Wahlkampf	585	Coded	
	21	174	Parlament soll Restlaufzeiten für AKW festlegen	526	Partially Coded	
	23	175	Erlauschtes aus Liestals Rathausstrasse...	329	Partially Coded	
	26	176	den Jura nicht opfern, Brudermann setzt auf Wind	1'702	Coded	
	29	177	Jetzt Farbe bekennen!	319	Coded	
Dec	2	178	Erste Schritchen zum Atomausstieg	414	Partially Coded	
	8	179	Das Parlament setzt den Rotstift an	519	Dismissed	
		180	Die Zauberformel ist veraltet	545	Partially Coded	
	9	181	Irrationale Politik	251	Partially Coded	
2015	Jul	17	182	Nachrichten	391	Partially Coded
		27	183	Wie eine Maus, die dem Elefanten droht	998	Dismissed
			184	Guldimann täte dem Parlament gut...	740	Dismissed
			185	Ein grosser Verlust von altem Kulturgut	498	Dismissed
	30	186	Was ist ein guter Schweizer?	482	Dismissed	
Aug	7	187	Die Grünliberalen machen das Quartett in der Mitte komplett	791	Dismissed	
	13	188	SP macht am Telefon mobil	613	Partially Coded	
	14	189	Vielleicht sollte er mal einen Asylanten kennen lernen	1'036	Dismissed	
	15	190	Wahlkampf im Aargau Kandidierende und ihre speziellen Aktionen	1'165	Dismissed	
	19	191	Jetzt nicht übertreiben	455	Dismissed	
		192	Es hatte fast schon etwas Feierliches, als die SP Schweiz gestern Morgen vor den Medien in Bern ankündigte, ihre finanziellen Mittel für den Wahlkampf 2015 offenzulegen	792	Partially Coded	
	20	193	Der Eigenmietwert müsste auch berücksichtigt werden	967	Dismissed	
		194	Einsatz für Benachteiligte	460	Dismissed	

	195	Mit Selbstvertrauen und Badehosen	454	Coded
25	196	Vorstoss; Wissenschaftler lancieren Initiative für klimafreundliche Gebäude	778	Dismissed
27	197	Parteien hängen 20'000 Plakate auf	616	Dismissed
29	198	125 SP; Darf eine Partei vor allem das Errungene verteidigen?	2'074	Dismissed
31	199	Festakt zum 125-Jahr-Jubiläum Die SP feiert mit prominentem Besuch	609	Coded
Sep 7	200	Freisinnige Schreckensszenarien	748	Partially Coded
8	201	Situation mit einfachen Mitteln entschärfen	608	Coded
10	202	Pole kommen sich nicht näher	440	To do
	203	Energiewende	633	Dismissed
	204	Der Nachname ist sein Wahlprogramm	1'128	Dismissed
	205	Zürichs Ständeräte Der Abschied von Verena Diener und Felix Gutzwiller	1'878	Coded
	206	Mehr Utopie	843	Partially Coded
11	207	Beinahe-Unfall ist kein Argument für längere Piste	735	Coded
12	208	Mister Energiewende	918	Dismissed
14	209	In eigener Sache; Heute Stammtisch mit Wahlkandidaten	167	Dismissed
16	210	An Strasse und Schiene scheiden sich die Geister	708	Coded
	211	«Anpassung des Waldgesetzes an Energiestrategie ist logisch»	697	Dismissed
	212	Gemeinderat zeigt sich empört	578	Partially Coded
18	213	Der Kampf der Absteiger	1'121	Partially Coded
19	214	Ständeratswahl Wahlpodium im Grossratssaal einen Monat vor der Wahl	1'128	Partially Coded
	215	Der Kampf der Aussenseiter	867	Dismissed
	216	Das Flüchtlingsdrama prägt die Schweiz der nächsten vier Jahre	713	Dismissed
	217	In eigener Sache; bz lädt ein zum Wahlstammtisch	157	Dismissed
	218	Wahlkampf auf dem Bucket der Flüchtlinge	838	Coded
21	219	Die Kraftwerke im Gegenwind	728	Coded
	220	Olten; Umschalten, damit Energiewende gelingt	200	Partially Coded
23	221	Wo der wahre Gott hockt	1'021	Partially Coded
24	222	Eine Frechheit gegenüber andersdenkenden Bürgern	939	Dismissed
26	223	Der Engpass ist die klinische Ausbildung	737	Dismissed
	224	Wie politisch ist die Jugend?	900	Partially Coded
	225	Zum Schluss stand SVPLer im Mittelpunkt	403	Dismissed
28	226	Ein Ständerats-Podium aus der Sicht von Schülern	482	Coded
	227	Die beiden FDP-Zugpferde wollen kein neues AKW	528	Coded
	228	Riesige Mikroskope für kleine Firmen	1'398	Partially Coded
30	229	«Und was tun Sie für den Aargau?»	343	Partially Coded
Oct 2	230	Galladé und Girod sind am umweltfreundlichsten	583	Coded
	231	Zuchwil; BDP besucht Hybridwerk	290	Partially Coded
5	232	Linke Projekte könnten kippen	601	Partially Coded
8	233	Maya Graf, Grünen-Nationalrätin, Sissach	1'799	Partially Coded
	234	Egloff fordert mehr Rechtssicherheit	1'499	Partially Coded
9	235	Christliche Werte unterschiedlich interpretiert	983	Partially Coded
	236	Genug ist genug!	971	Partially Coded
	237	Das Parlament fällt Entscheide, die lange undenkbar waren	2'042	Partially Coded
13	238	Die Rolle der CVP ist wenig spektakulär – aber wichtig	712	Dismissed
	239	«Junge haben kein Vertrauen in Politik»	600	Dismissed
	240	Die Angst geht um bei den grossen Parteien	729	Dismissed
	241	Platz frei für die junge Generation	840	Partially Coded
14	242	Man soll uns nicht laufend Sand in die Augen streuen	970	Partially Coded
	243	Nachhaltige Politik für alle	975	Partially Coded
	244	Flauer Wahlkampf? Egal, auf zur Wahl!	264	Dismissed
17	245	Die Rechte der Bürger einschränken, beschneiden	487	Dismissed
	246	Wir dürfen das Geld nicht am Gotthard verlochen	561	Coded
	247	Analyse zu den National- und Ständeratswahlen von morgen	753	Dismissed
19	248	Der Rechtsrutsch wird die Finanz-, Sozial- und Energiepolitik verändern	880	Partially Coded
	249	Stadt und Land driften auseinander – nicht nur in der Region Basel	542	Dismissed
	250	«Die Region ist untervertreten»	765	Dismissed
	251	Historisch: Eymann und Arslan statt Lehmann und Stolz	691	Dismissed
	252	«Hätte 200 Franken gewettet»	280	Dismissed
	253	Die Rechte der Bürger einschränken, beschneiden	492	Dismissed
	254	Ihm verhalten die EVP-Stimmen zum Wahlsieg	676	Dismissed
	255	«Flüchtlingsdiskussion hat geschadet»	350	Dismissed
	256	Trotz Protest im Verwaltungsrat	524	Dismissed
20	257	Nachgefragt; «Die Energiewende brachte das Fass zum Überlaufen»	494	Dismissed
	258	«Sind eine Wischiwaschi-Partei»	541	Partially Coded
	259	Ein Ende des Wachstums ist nicht in Sicht	359	Dismissed
	260	SP ist zuversichtlich	290	Dismissed
	261	«Bleiben Sie kritisch»	987	Dismissed

		262	Linker und liberaler als der Durchschnitt	318	Dismissed	
21		263	Selbstkritik bei Wermuth: «Schwäche der Linken»	455	Dismissed	
		264	Wahlen 2015: Gewinner und Verlierer im Zurzibiet	482	Dismissed	
22		265	Humbel tritt gegen Knecht und Müller an	217	Dismissed	
24		266	Die verwirrenden Signale der SVP	602	Dismissed	
28		267	«Das kann der SP schon vorwerfen»	991	Dismissed	
29		268	Ständeratswahlen; Humbel erhält keine GLP-Empfehlung	192	Dismissed	
		269	Zwei Bürgerliche in den Ständerat?	796	Partially Coded	
		270	Bundesrat hält an Lenkungsabgaben fest	410	Partially Coded	
30		271	Ueli Giezendanner lädt BDP ein: «Kommt zu uns!»	637	Dismissed	
		272	Nachrichten	163	Dismissed	
31		273	«Das Vertrauen ist nahe am Nullpunkt»	926	Dismissed	
Nov	4	274	Der nächste Steuerschock droht	708	Partially Coded	
		275	Für Zanetti – damit Energiewende nicht ausgebremst wird	317	Coded	
	5	276	Plötzlich haben die Grünen Geld	611	Dismissed	
	6	277	Von einem Brückenbauer und von einem Sprengmeister war kürzlich in einem Lesebrief zu den Ständeratswahlen zu lesen	4'249	Partially Coded	
		278	Wer begleitet Daniel Jositsch nach Bern?	448	Dismissed	
11		279	Für Grundwerte unseres Landes	804	Partially Coded	
12		280	Das Zeugnis für unsere Landesväter und -mütter	2'023	Dismissed	
18		281	Energiedebatte: Wie in Aarau, so in Bern?	256	Coded	
		282	Energiezukunft: Aargau will sich nicht festlegen	621	Coded	
20		283	Brennstäbe für das Referendum geladen	543	Coded	
21		284	Dreiland schliesst sich Klimabündnis an	1'077	Dismissed	
23		285	«Wir haben keinen Sitz gewonnen, aber gewonnen»	641	Dismissed	
28		286	«SVP zeigt ihr totalitäres Gesicht»	1'562	Dismissed	
30		287	Der Fleissige, der Zarte, der Jüngste	516	Dismissed	
Dec	14	288	Das sind die Eckpunkte des Pariser Abkommens	1'012	Coded	
		289	Der Klimavertrag von Paris setzt die Schweiz unter Druck	256	Coded	
15		290	Aargauer stürmen «Asylkommission»	547	Dismissed	
18		291	Mehr als nur ein Marketinginstrument	962	Partially Coded	
28		292	Was ist richtige Politik?	552	Partially Coded	
30		293	Grimmel-Stausee; SVP Grossräts setzen sich für höhere Mauer ein	145	Partially Coded	
30		294	Den Jahrhundertunsinn «Energiewende» begraben	660	Coded	
2016	Jan	4	295	So kommt 2016 gut	896	Partially Coded
			296	Den Glauben ins Spiel bringen	990	Partially Coded
	7		297	Der Retter von Rechts	686	Dismissed
			298	Mutlose SP stellt sich ins Abseits	634	Dismissed
			299	Was, wenn Erdöl nicht mehr teuer wird?	765	Coded
	14		300	Bischof wird nicht CVP-Präsident	724	Partially Coded
	19		301	Was für eine Kleinlichkeit unsererseits!	1'003	Partially Coded
	20		302	Der Hardliner und seine Dämonen	901	Dismissed
			303	Schüler sorgen für Diskussion	618	Coded
	23		304	Auf dem Pausenplatz der Politiker	533	Partially Coded
	27		305	Atomkraftwerke laufen ohne Beschränkung weiter	568	Coded
Feb	15		306	Die anderen haben ein Brett vor dem Kopf	1'968	Partially Coded
	18		307	Staumauer wird Fall fürs Bundesgericht	421	Coded
	20		308	Nachrichten	244	Partially Coded
	27		309	Neuer Präsident in Kampfwahl geklärt	423	Dismissed
Mar	3		310	Was von der Energiestrategie übrig bleibt	771	Coded
	5		311	«Die nächste Katastrophe kommt bestimmt»	1'344	Coded
	7		312	Die Politiker müssen endlich Farbe bekennen	1'218	Partially Coded
	9		313	Das Tafelsilber wird verscherbelt	720	Partially Coded
	12		314	Immerhin hat er geredet – in einer Fremdsprache	777	Partially Coded
	17		315	Strompolitik - viel lief falsch	669	Coded
	18		316	Bauchgefühle statt rationales Denken	981	Partially Coded
			317	Die ungenutzte Kraft des Hochrheins	653	Coded
	19		318	Definitiver Entscheid fällt an der Urne	638	Coded
	23		319	Wer sich Sorgen macht, schürt nicht Ängste	942	Partially Coded
Apr	6		320	Die Ära Walti als Wendepunkt	645	Dismissed
	7		321	Es gibt keinen Königsweg	664	Coded
	8		322	Ein skurriler Vorschlag der SP	807	Partially Coded
	11		323	Kultur des «Nichtfragens» und «Nichtthematisierens»	1'083	Dismissed
	20		324	Einerseits herausfordernd, andererseits mutlos	916	Partially Coded
	20		325	Angst provoziert beim Hund natürliche Reaktionen	638	Partially Coded
	23		326	Diese Kirche wird auch Solarstrom liefern	491	Coded
May	17		327	Die SRG sollte auf alle Umfragen verzichten	1'106	Partially Coded

	20	328	Unsere alten Werte nicht einfach über Bord werfen	592	Partially Coded	
Jun	1	329	Abwarten mit Wechsel in den freien Strommarkt	376	Coded	
		330	Das Bilderbuch hat nichts genützt	812	Coded	
	3	331	Breite Allianz fürs Energiegesetz	478	Coded	
	9	332	Energiewende: Kein Alleingang mit einer kantonalen Steuer	600	Coded	
	15	333	AKW-Kritik; Hoffen auf 10'000 Demonstranten	407	Coded	
	25	334	Was wollen wir Zuchwiler?	762	Partially Coded	
Jul	6	335	Hurra, wir erhalten eine Deponie	700	Partially Coded	
	14	336	Stromproduktion Geothermie sucht weiter den Durchbruch	923	Coded	
Aug	26	337	Die Fälle, die Schwache treffen, häufen sich	1'125	Partially Coded	
Sep	13	338	Ein erstes Stottern im Sparprozess	620	Coded	
	15	339	Das Spital Muri würden sie behalten	658	Partially Coded	
	16	340	Stimmen von Nutzern des Hallenbades	793	Dismissed	
	17	341	Viel Erfolg beim Aufbruch zu neuen Taten	772	Partially Coded	
	20	342	Die Energiewende ist definitiv	448	Coded	
	22	343	Wie wäre es mit Sockenflicken?	1'108	Partially Coded	
		344	Widersprüche; Tauziehen um Fessenheim	985	Coded	
		345	Ist die Energiewende «links»?	696	Coded	
	23	346	Wasser, fliesse fortan bergauf!	957	Partially Coded	
	24	347	Schockierender Gedanke	816	Partially Coded	
	30	348	Lehrplan 21 sorgt für Unruhe	777	Partially Coded	
Oct	1	349	Wer gegen sie ist, hats schwer	633	Dismissed	
		350	Viererticket gleicht einem verpixelten Fahndungsbild	665	Dismissed	
	6	351	Eines Papstes unwürdig	863	Partially Coded	
	8	352	Im Land der Chancen und Eisbären	1'407	Partially Coded	
		353	Präsident Martin Schutz weigert sich, sein Amt abzugeben	290	Dismissed	
	10	354	«Man darf immer klüger werden»	2'060	Partially Coded	
	11	355	Der Zusammenhang zur nationalen Politik	984	Dismissed	
	12	356	«Lässt sich nicht kompensieren»	542	Coded	
		357	Energiewende; Bundesrätin warnt vor Blackouts	94	Coded	
	13	358	Balsthal; SP nominiert für den Kantonsrat	297	Dismissed	
	17	359	Topverdiener bezahlen hier viel zu wenig	698	Dismissed	
	19	360	Ein Erstarren der SVP schadet uns allen	1'063	Partially Coded	
	20	361	Auch für die Innenstadt unentbehrlich	809	Partially Coded	
	22	362	Die Kleinen müssen frech sein	660	Dismissed	
	26	363	Wir wollen keine Auslandabhängigkeit	761	Coded	
	28	364	SP rüstet sich für die Wahlen	428	Coded	
Nov	3	365	Gigantisches Deponievorhaben stoppen	858	Partially Coded	
	4	366	«So können wir nicht mehr weitermachen»	836	Dismissed	
	8	367	Wasser predigen und Wein trinken	1'556	Coded	
	9	368	BDP nominierte vier Kandidaten	201	Dismissed	
		369	Macht das Netz schlapp?	627	Coded	
	14	370	Die Schweiz würde stillstehen	1'618	Coded	
	17	371	Trend weist zu Nein	272	Coded	
	19	372	Investitionsstau bei den stadteigenen Immobilien	794	Partially Coded	
	24	373	Ausstieg – was den sonst?	1'170	Coded	
	28	374	Nach der Schlacht ist vor der Schlacht	757	Coded	
		375	Die beiden Basel wollen den Atomausstieg	564	Coded	
		376	Chancen für die Energiewende stehen trotzdem gut	234	Coded	
	29	377	Heute; Der Blattmacher empfiehlt	82	Coded	
		378	Wahlverwandtschaften	760	Partially Coded	
		379	FDP-Politiker liebäugeln damit, die Energiestrategie zu kippen	264	Coded	
		380	«Bürgerlicher Zusammenarbeit müssen wir bei den Wählern etablieren»	338	Coded	
		381	Bald müssen sie Position beziehen	235	Coded	
	30	382	Eine bittere Pille für den Kanton	1'062	Partially Coded	
Dec	1	383	Es gibt Armut – direkt in unserer Nachbarschaft	778	Partially Coded	
	7	384	Passivität am falschen Ort	655	Partially Coded	
	13	385	Sie regiert weit entfernt vom Bürger	757	Partially Coded	
	19	386	Montagsinterview Doris Leuthard ; «Frau Merkel ist meine Konstante»	2'034	Dismissed	
2017	Jan	21	387	Debattieren mit Doris	438	Partially Coded
	Feb	8	388	Wo bleibt die Transparenz?	1'053	Partially Coded
		11	389	Die SP Solothurn-Lebern zu Besuch bei Fankhauser Solar AG in Setzach	298	Coded
		14	390	Auf dem Stierenberg hats genug Wind, um Strom zu produzieren	771	Coded
		23	391	Wohin mit dem Geld, dem Gas, der Stadtpolizei und dem Bauland?	2'645	Partially Coded
		28	392	Briefe an die az	294	Coded
Mar	1	393	Stromausfall in den TV-Nachrichten	630	Coded	
	9	394	Eine Umwelt-Steuer für den ausländischen Dreck-Strom	985	Partially Coded	

	14	395	Ein Volksentscheid wäre wichtig fürs Gelingen	244	Coded
	15	396	Kölliken hat gute Gründe, sein Tafelsilber zu verkaufen	505	Coded
	20	397	Das ist kein Erfolg des Ministerpräsidenten	693	Partially Coded
	30	398	«Die Zahlen der SVP sind hanebüchern»	2'041	Partially Coded
	31	399	Die Sachzwänge sind kostspielig	643	Coded
		400	Energiegeladen über Energie debattiert	672	Coded
Apr	3	401	Veraltete, verfilzte Wahlkriterien	1'040	Partially Coded
		402	Dieser Artikel muss gelesen und beherzigt werden	795	Partially Coded
		403	Energiedienst: Ära geht zu Ende	296	Coded
	4	404	Überparteiliches Ja zur Energiestrategie 2050	303	Coded
	5	405	Wunschliste ohne Kostenplanung	570	Partially Coded
		406	Die Strategie fördert einheimische Energien	503	Coded
		407	Mehr Platz für Junge	553	Partially Coded
	7	408	Energiegesetz; Aargauer Wirtschaft ist uneinig	1'043	To do
	13	409	Kaltdusch-Knatsch, aufgewärmt	559	Coded
	18	410	«Ein Franken pro Woche reicht»	497	Coded
	20	411	Angriff ist gut und lenkt ab	1'086	Partially Coded
	21	412	Wer den Goldesel verhungern liess	508	Coded
	25	413	Deutschland kopiert die Schweiz	714	Coded
		414	Dem Einsatz gebührt Respekt und Anerkennung	923	Partially Coded
	26	415	Geringer Einfluss der Jungen	1'021	Partially Coded
	27	416	«Energiewende kommt sowieso, es gibt keinen Weg zurück»	318	Coded
	28	417	Die Stadt soll rot werden	474	Coded
May	4	418	CVP Bezirk Zurzach	644	Coded
		419	Hoffentlich hält sich der Kommerz etwas zurück	1'230	Partially Coded
	8	420	Nachrichten	178	Partially Coded
	9	421	«kein guter Deal für die Umwelt»	246	Coded
	10	422	Unsere Kinder sind keine Versuchskaninchen	804	Partially Coded
		423	Die kleinen und die grossen Probleme	1'069	Partially Coded
		424	Der richtige Weg in die Energiezukunft	1'981	Coded
	12	425	Dazu braucht es keinen zusätzlichen Sitz	1'238	Partially Coded
	15	426	Übermorgige Atomgläubige und die Gesundheit	723	Partially Coded
	16	427	Energiestrategie: Adolf Ogis Eiertanz	651	Coded
		428	Weltweiter Umbau des Energiesystems	1'988	Coded
	17	429	Nachrichten	126	Partially Coded
		430	Schluss der Debatte	1'154	Partially Coded
		431	Das ist nur ein kleines Beispiel	1'039	Partially Coded
	22	432	Abstimmungsergebnis im Detail; Jetzt beginnt das Feilschen erst recht	1'099	Coded
		433	Je näher am AKW, desto mehr Nein für das Energiegesetz	753	Coded
		434	Leuthards Sieg für die Geschichtsbücher	514	Coded
	24	435	5 Gründe, warum der Erfolg der SVP unter Alber Rösti ausbleibt	394	Dismissed
	29	436	Mächtig Zündstoff	964	Coded
	30	437	Stromnet-Gesetz; Strom-Hilferuf bleibt unerhört	753	Coded
Jun	2	438	Brigit Wyss; Warum die Grünen die Wirtschaft suchte	107	Coded
	8	439	Damit Strom und Wasser weiter fliessen	638	Coded
	12	440	Montagsinterview Martin Bäumle; «Mein Helden- status wäre wohl grösser»	2'110	Dismissed
Jul	11	441	Steuergesetzrevision entzweit die Gemüter	501	Dismissed
	28	442	Die Schweiz muss die Preise senken	1'106	Dismissed
	31	443	Morgen feuert die Schweiz wieder Raketen ab. Das Land feiert Geburtstag	1'326	Dismissed
Aug	2	444	Die Gründe für Doris Leuthards Rücktritt	297	Coded
	25	445	«Ich bin an meine Grenzen gestossen»	910	Partially Coded
Sep	18	446	Montagsinterview Lukas Bärfuss ; «Das Amt ist stärker als die Partei»	1'688	Dismissed
Oct	10	447	Der grüne Liberale prägte die Stadt	790	Coded
	19	448	Nachrichten	375	Partially Coded
Nov	2	449	Tauziehen um die Grundsätze	783	Partially Coded
	10	450	Zwei Parteilose kämpfen um Sitz	217	Dismissed
	28	451	Irène Kälin als neue Nationalrätin vereidigt	740	Partially Coded
Dec	8	452	Die SP möchte drei Sitze	476	Dismissed
	11	453	Café Fédéral; Die «Thomas-Minder-Stadt»	262	Dismissed
	13	454	Das sind die wichtigsten Etappen der Energiepolitik der letzten Jahre – und das steht noch bevor	644	Coded
	15	455	Regierung ist gegen einen Energiefonds	474	Coded
2018	Jan	3	456 «Sie verweigern die Arbeit»	859	Dismissed
		16	457 Kanton versüsst Freude am Energiesparen	759	Coded
		30	458 Fraktionskommentare zur Januar-Session im Solothurner Kantonsrat	1'105	Coded
		31	459 Kantonsrat Knappe Mehrheit für schärfere Energie(spar)vorschriften	713	Coded
Feb	28	460	Kein neues Gesetz	213	Coded

Mar	5	461	Analyse zu den Stadtzürcher Wahlen; Linksrutsch im rot-grünen Zürich	750	Dismissed	
	14	462	Atomdebatte im Aargau	735	Coded	
Apr	4	463	Erneuter Vorstoss für erneuerbares Gas	549	Coded	
	17	464	«Die Luft ist ein wenig draussen»	1'404	Dismissed	
	24	465	Umweltverbände für das Energiegesetz	264	Coded	
May	2	466	Antifreiheitlich und antisozial	1'166	Coded	
	4	467	Ein Abgang mit Misstönen	523	Dismissed	
	18	468	Politisches Engagement; Keiner hat mehr Infos aus erster Hand	1'920	Partially Coded	
	22	469	Menschen kommen nicht oder nur als Träumer vor	1'087	Partially Coded	
		470	So viel ist der Persönlichkeitsschutz wert	1'292	Partially Coded	
	24	471	Die Gebirgskantone setzen sich durch	681	Coded	
	31	472	Der Nationalrat vergiesst Krokodilstränen	1'425	Partially Coded	
Jun	5	473	Das Gesetz ist notwendig für günstigere Energie	1'185	Coded	
	6	474	Eine Biogasanlage für Sisseln	381	Coded	
	7	475	Schluss der Debatte	1'076	Partially Coded	
	11	476	Sie trat wegen Blocher der SP bei	787	Dismissed	
	28	477	Vorkommnisse in der Schweiz sind Peanuts	782	Partially Coded	
Jul	12	478	Kägi hört auf, Stocker will bleiben	824	Dismissed	
	16	479	Politformel «So tun als ob»	918	Partially Coded	
		480	Wir werden ihn vermissen	611	Partially Coded	
Aug	20	481	Diesen Smart treibt die Suhre an	472	Coded	
Sep	24	482	Bitte anders, richtig!	491	Partially Coded	
		483	Sachlicher Artikel, tendenziöser Titel	1'002	Partially Coded	
	26	484	Betroffen sind alle, die ihr Gesicht nicht zeigen wollen	1'020	Partially Coded	
	28	485	Analyse von Othmar von Matt zum Rücktritt von Bundesrätin Doris Leuthard	526	Partially Coded	
Oct	2	486	Energiesparkampagne; «Projekt schnellstmöglich stoppen»	330	Coded	
	3	487	Kernenergie steht vor Aufschwung	1'100	Coded	
	26	488	Keine einzige Stelle wurde vermittelt	395	Partially Coded	
Nov	19	489	Gerupfte Franzosen	222	Coded	
	21	490	Kantonale GLP hat neue Parteispitze	753	Dismissed	
		491	Wo das Land bei der Energiewende steht	755	Coded	
	30	492	Energy Challenge; Millionen für Kampagnen, Werbung und Aktionspläne	959	Coded	
Dec	4	493	Aargauer Bundesräte: Vier Männer, eine Frau	910	Dismissed	
	7	494	Wo die Schweiz mit der EU steht	1'528	Dismissed	
	11	495	Alain Berset SP	631	Dismissed	
	20	496	Der letzte Akt	1'509	Coded	
2019	Jan	8	497	Energiepolitik; Von der Bundesrätin zur Bank	355	Dismissed
		17	498	Mit viel Emotionen und wenig Vernunft	1'021	Coded
		22	499	Herzmedizin in Aarau – die Nerven liegen blank	1'153	Dismissed
		28	500	128,7 Millionen für Energie aus Abwasser	723	Coded
		31	501	Drei für zwei beim Gewerbeverband	661	Dismissed
Feb	12	502	Die Energiewende gerät in den Kantonen ins Stocken	617	Coded	
	15	503	Naiver Liberalismus	905	Partially Coded	
	18	504	Analyse zur Debatte über ein neues CO ₂ -Gesetz; Die Klima-Uhr tickt	806	Coded	
	20	505	Die GLP setzt nicht nur auf Umweltthemen	381	Partially Coded	
Mar	11	506	Der Klimaschutz hat nichts davon	224	Coded	
	13	507	SP will AKW-Befürworter in der Axpo-Führung verhindern	691	Coded	
		508	«Energienstadt Schweiz»	682	Coded	
	18	509	Café Fédéral; Mit dem Steuerabzug die Welt bewahren	267	Dismissed	
	22	510	An der Finanzierung schneiden sich die Geister	719	Dismissed	
	26	511	Sie haben gut Lachen	986	Partially Coded	
		512	Keine Spur von Resignation; Die BDP ist im Jetzt-erst-recht-Modus	406	Partially Coded	
Apr	2	513	Keine Kompromisse, wenns ums Klima geht	244	Coded	
	5	514	Schützenhilfe aus Berlin	632	Coded	
	12	515	Geschäftsjahr 2018; Energiewende heizt die Nachfrage an	684	Coded	
May	13	516	GLP: Aarau soll CO ₂ -Abgabe erheben	415	Coded	
	21	517	Das Hanfbrot aus der SVP-Mühle	907	Dismissed	
	23	518	«Gaskraftwerke kommen dem Klimaschutz in die Quere»	853	Coded	
		519	Stromversorger: Statt AKW bald Gaskraftwerke im Aargau	210	Coded	
	28	520	Vom Bengel zum Politerklärer	494	Dismissed	
		521	Die Bienen sind für alle Bauern wichtig	1'147	Partially Coded	
Jun	4	522	An Fussgänger auf Plätzen denkt man meist gar nicht	1'159	Partially Coded	
	18	523	Schwache Besitzer	224	Coded	
	21	524	Sanavita nutzt Sonnenenergie	345	Coded	
		525	Nachverhandlungen ausgeschlossen	1'053	Partially Coded	
Jul	3	526	3 Mrd Franken teuer; SP will mit grünem «Marshallplan» das Klima retten	141	Coded	
	5	527	PSI tüfelt an der Energiewende	832	Dismissed	

	11	528	Proteste gegen Flugticketabgabe in Frankreich	337	Coded
	15	529	Protest ruft zu Flugverzicht auf	438	Coded
	19	530	Hoffen auf den Amherd-Effekt	875	Coded
Aug	21	531	Baden	1480	Dismissed
	28	532	Baden	332	Dismissed
	30	533	«Der Vorstoss ist vor allem Symbolpolitik»	963	Coded
		534	Greta segelt, die Klimabewegung im Aargau ruft zur Velodemo	855	Coded
		535	«Die Energiewende findet in den Aargauer Gemeinden statt»	606	Coded
Sep	2	536	Klimawandel: BDP fordert machbare Lösungen	358	Coded
	20	537	Keine Angst vor dem Schreckgespenst!	635	Coded
	27	538	Im Zeichen des Klimawandels, eine wenig bekannte Partei und viele Köpfe	835	Partially Coded
Oct	1	539	Landschaftsschutz gegen Wasserkraft	718	Coded
	2	540	Diese Themen tragen Fricktaler nach Bern	1004	Dismissed
	7	541	«Netto Null? Das ist Schaumschlägerei»	471	Dismissed
	11	542	«Dann verweht es uns halt»	1443	Dismissed
		543	Ein sanfter Schritt nach vorne in der Klimapolitik	747	Coded
	15	544	Jedem die eigene Wasserstoff-Tankstelle	736	Coded
	24	545	Wann ist Baden klimaneutral?	474	Coded
	28	546	Die «grosszügigen» Abfindungen sind nur Almosen	1127	Partially Coded
	30	547	Aarau	340	Dismissed
Nov	6	548	Der Aargau geht in die Solar-Offensive	399	Coded
	11	549	Strom ist künftig am Tag günstiger	821	Coded
	13	550	So viel kostet die CO ₂ -Abgabe die Mieter und Eigenheimbesitzer	680	Coded
	14	551	In der Mitte liegt die Tugend	844	Dismissed
	25	552	«Es gibt keinen Öl-Peak, das ist Quatsch»	998	Coded
Dec	9	553	Über Staffelegg, ins Fricktal oder gar nicht?	1035	Partially Coded
		554	Den Täter ausschaffen	512	Partially Coded
	10	555	«Cassis hat vergessen, den Reset-Knopf zu drücken»	2507	Dismissed
	12	556	Viel Arbeit für neue Bundespräsidentin	432	Dismissed
	19	557	Darauf sollte nicht verzichtet werden	1307	Partially Coded
	27	558	Lehren für den Wahlkampf	205	Dismissed
		559	Die Vögel drohen auszusterben	978	Partially Coded

FIGURE 11: MONTHLY CODING STATUS OF SAMPLED NEWSPAPER ARTICLES.

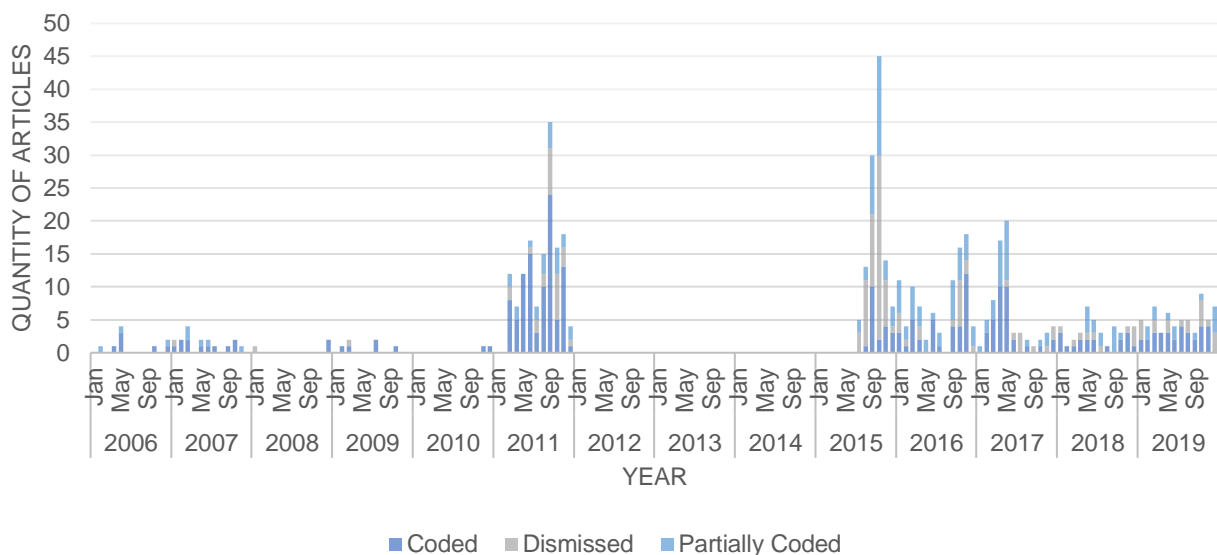


TABLE 6: INVENTORY OF CODED OPINION LETTERS AND THEIR RESPECTIVE QUANTITY PER ARTICLE.

Year	Month	Day	No.	Title	Words	No. of Comments
2007	Mar	22	17	Noch immer nicht befriedigend gelöst	1'951	1
	May	5	18	Schnelles Handeln notwendig	658	1
2009	Mar	20	32	Noch mehr Zahlen	681	1
2011	Mar	15	38	Atomkraftwerke sind nicht beherrschbar	511	4
		17	41	Raus aus dem Atom-Wahnsinn	557	2
		29	49	Blanker Hohn	332	1
		18	55	Lieber Visionäre als Wendehälse	568	2
		21	56	Ausnahmetalente nicht mehr als nötig stressen	542	1
		25	62	Kapitän auf einem untergehenden Dampfer	309	1
	Jun	14	74	Solaranlagen stören weniger als das Restrisiko der AKW	526	2
	Jul	4	87	Stromverbrauch an das Angebot anpassen	608	3
		9	90	Gegensteuer geben, solange es noch Zeit ist!	507	1
		28	92	Sicherheit vorgegaukelt	286	1
	Aug	4	93	FDP ist realistisch und verantwortungsbewusst	468	1
		18	99	Jetzt zählt jede Stimme	638	2
	Sep	2	109	Es braucht klare Signale; Ständeräte schwächen Atomausstieg ab	347	2
		16	124	Künftig Strom aus der Wüste?	527	2
		17	128	Wie ein Phönix aus der Atom-Asche	76	1
		23	137	Wirtschaft und Umwelt: Ich will beides!	316	1
	Oct	3	145	Technologiewende statt Energiewende	325	1
		6	148	«Wollen zehn Prozent Wähleranteil»	246	1
			149	Israel will keinen Palästinenserstaat zulassen	329	1
		17	154	«Die Schweiz braucht eine starke Mitte»	138	2
	Dec	9	180	Die Zauberformel ist veraltet	545	1
2015	Jul	17	182	Nachrichten	391	2
	Aug	13	188	SP macht am Telefon mobil	613	1
		19	192	Es hatte fast schon etwas Feierliches,... als die SP Schweiz gestern Morgen vor den Medien in Bern ankündigte, ihre finanziellen Mittel für den Wahlkampf 2015 offenzulegen	792	2
	Sep	7	200	Freisinnige Schreckensszenarien	748	1
		10	206	Mehr Utopie	843	2
		21	220	Olten; Umschalten, damit Energiewende gelingt	200	1
		23	221	Wo der wahre Gott hockt	1'021	2
	Oct	9	235	Christliche Werte unterschiedlich interpretiert	983	1
		13	241	Platz frei für die junge Generation	840	1
		14	242	Man soll uns nicht laufend Sand in die Augen streuen	970	1
		14	243	Nachhaltige Politik für alle	975	1
		17	246	Wir dürfen das Geld nicht am Gotthard verlochen	561	1
		29	270	Bundesrat hält an Lenkungsabgaben fest	410	1
	Nov	11	279	Für Grundwerte unseres Landes	804	1
		18	281	Energiedebatte: Wie in Aarau, so in Bern?	256	1
	Dec	28	292	Was ist richtige Politik?	552	1
		30	294	Den Jahrhundertunsinn «Energiewende» begraben	660	1
2016	Jan	4	296	Den Glauben ins Spiel bringen	990	1
		19	301	Was für eine Kleinlichkeit unsererseits!	1'003	1
	Feb	15	306	Die anderen haben ein Brett vor dem Kopf	1'968	1
	Mar	7	312	Die Politiker müssen endlich Farbe bekennen	1'218	1
		9	313	Das Tafelsilber wird verscherbelt	720	1
		12	314	Immerhin hat er geredet – in einer Fremdsprache	777	1
		18	316	Bauchgefühle statt rationales Denken	981	1
		23	319	Wer sich Sorgen macht, schürt nicht Ängste	942	1
		8	322	Ein skurriler Vorschlag der SP	807	1
	Apr	20	324	Einerseits herausfordernd, andererseits mutlos	916	1
			325	Angst provoziert beim Hund natürliche Reaktionen	638	2
	May	17	327	Die SRG sollte auf alle Umfragen verzichten	1'106	1
		20	328	Unsere alten Werte nicht einfach über Bord werfen	592	1
	Jun	9	332	Energiewende: Kein Alleingang mit einer kantonalen Steuer	600	1
		25	334	Was wollen wir Zuchwiler?	762	1
	Jul	6	335	Hurra, wir erhalten eine Deponie	700	1
	Aug	26	337	Die Fälle, die Schwache treffen, häufen sich	1'125	3
	Sep	17	341	Viel Erfolg beim Aufbruch zu neuen Taten	772	3
		22	343	Wie wäre es mit Sockenflicken?	1'108	2
		23	346	Wasser, fliesse fortan bergauf!	957	2

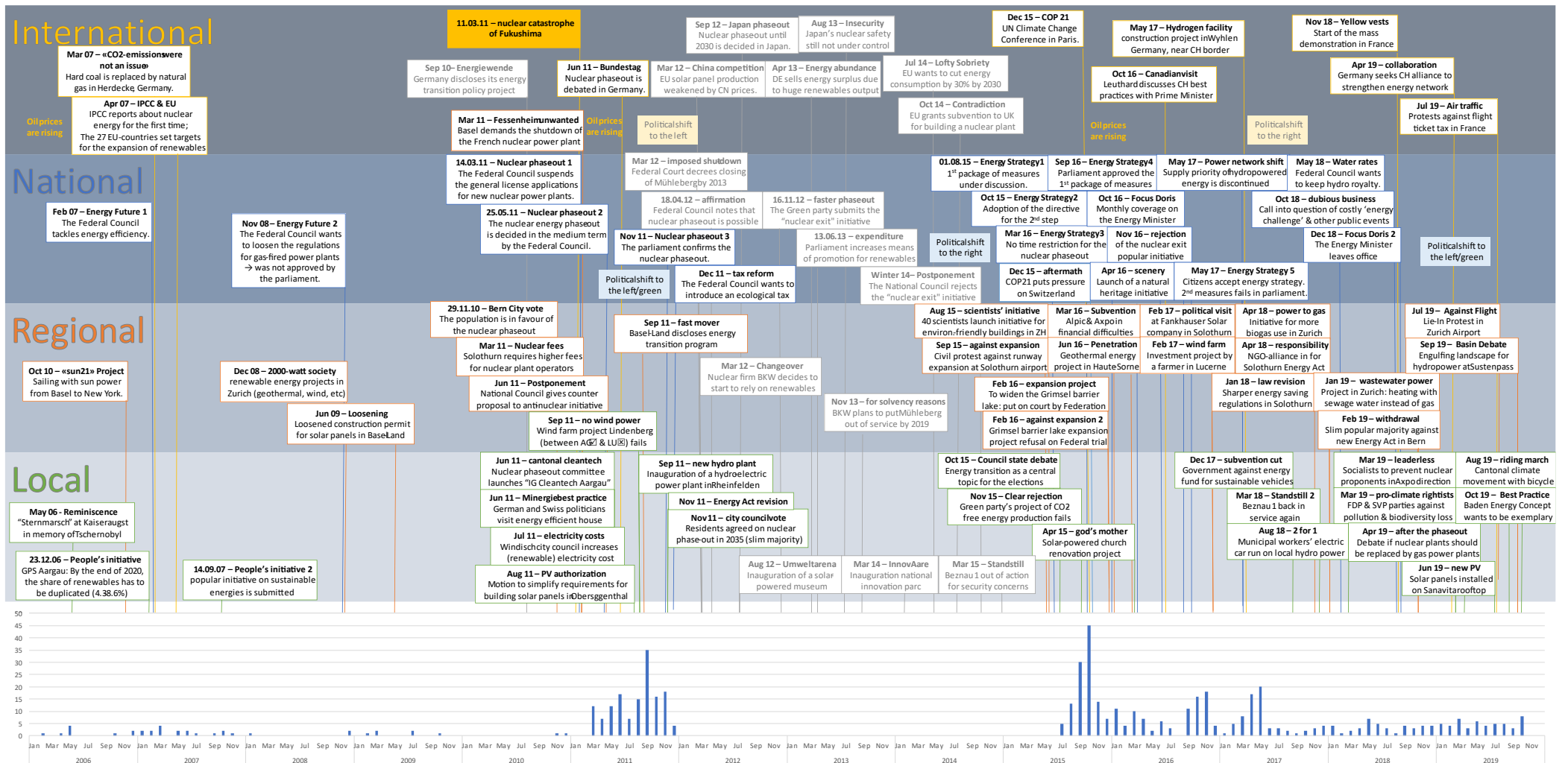
		24	347	Schockierender Gedanke	816	2
		30	348	Lehrplan 21 sorgt für Unruhe	777	1
Oct		6	351	Eines Papstes unwürdig	863	1
		19	360	Ein Erstarren der SVP schadet uns allen	1'063	1
		20	361	Auch für die Innenstadt unentbehrlich	809	2
		26	363	Wir wollen keine Auslandabhängigkeit	761	3
Nov		3	365	Gigantisches Deponievorhaben stoppen	858	1
		8	367	Wasser predigen und Wein trinken	1'556	12
		14	370	Die Schweiz würde stillstehen	1'618	10
		19	372	Investitionsstau bei den stadteigenen Immobilien	794	3
		24	373	Ausstieg – was den sonst?	1'170	6
		29	378	Wahlverwandtschaften	760	2
			381	Bald müssen sie Position beziehen	235	1
		30	382	Eine bittere Pille für den Kanton	1'062	1
Dec		1	383	Es gibt Armut – direkt in unserer Nachbarschaft	778	1
		7	384	Passivität am falschen Ort	655	1
		13	385	Sie regiert weit entfernt vom Bürger	757	1
2017	Feb	8	388	Wo bleibt die Transparenz?	1'053	2
		28	392	Briefe an die az	294	1
Mar		9	394	Eine Umwelt-Steuer für den ausländischen Dreck-Strom	985	1
		14	395	Ein Volksentscheid wäre wichtig fürs Gelingen	244	1
		20	397	Das ist kein Erfolg des Ministerpräsidenten	693	1
		31	399	Die Sachzwänge sind kostspielig	643	1
Apr		3	401	Veraltete, verfilzte Wahlkriterien	1'040	1
			402	Dieser Artikel muss gelesen und beherzigt werden	795	2
		5	405	Wunschliste ohne Kostenplanung	570	2
			406	Die Strategie fördert einheimische Energien	503	3
		20	411	Angriff ist gut und lenkt ab	1'086	5
		25	413	Deutschland kopiert die Schweiz	714	1
			414	Dem Einsatz gebührt Respekt und Anerkennung	923	1
		26	415	Geringer Einfluss der Jungen	1'021	2
May		4	419	Hoffentlich hält sich der Kommerz etwas zurück	1'230	1
		10	422	Unsere Kinder sind keine Versuchskaninchen	804	1
			423	Die kleinen und die grossen Probleme	1'069	5
			424	Der richtige Weg in die Energiezukunft	1'981	12
		12	425	Dazu braucht es keinen zusätzlichen Sitz	1'238	3
		15	426	Übermorgige Atomgläubige und die Gesundheit	723	2
		16	428	Weltweiter Umbau des Energiesystems	1'988	13
		17	430	Schluss der Debatte	1'154	5
			431	Das ist nur ein kleines Beispiel	1'039	1
		22	434	Leuthards Sieg für die Geschichtsbücher	514	1
2018	Jan	30	458	Fraktionskommentare zur Januar-Session im Solothurner Kantonsrat	1'105	5
	May	2	466	Antifreiheitlich und antisozial	1'166	4
		18	468	Politisches Engagement; Keiner hat mehr Infos aus erster Hand	1'920	1
		22	469	Menschen kommen nicht oder nur als Träumer vor	1'087	1
			470	So viel ist der Persönlichkeitsschutz wert	1'292	1
		31	472	Der Nationalrat vergiesst Krokodilstränen	1'425	4
Jun		5	473	Das Gesetz ist notwendig für günstigere Energie	1'185	6
		7	475	Schluss der Debatte	1'076	4
		28	477	Vorkommnisse in der Schweiz sind Peanuts	782	1
Jul		16	479	Politformel «So tun als ob»	918	1
Sep		24	482	Bitte anders, richtig!	491	1
			483	Sachlicher Artikel, tendenziöser Titel	1'002	1
		26	484	Betroffen sind alle, die ihr Gesicht nicht zeigen wollen	1'020	1
Oct		3	487	Kernenergie steht vor Aufschwung	1'100	1
		26	488	Keine einzige Stelle wurde vermittelt	395	1
Nov		19	489	Gerupfte Franzosen	222	1
2019	Jan	17	498	Mit viel Emotionen und wenig Vernunft	1'021	1
	Feb	15	503	Naiver Liberalismus	905	1
Mar		11	506	Der Klimaschutz hat nichts davon	224	1
May		28	521	Die Bienen sind für alle Bauern wichtig	1'147	2
Jun		4	522	An Fussgänger auf Plätzen denkt man meist gar nicht	1'159	2
		18	523	Schwache Besitzer	224	1
		21	525	Nachverhandlungen ausgeschlossen	1'053	2
Sep		27	538	Im Zeichen des Klimawandels, eine wenig bekannte Partei und viele Köpfe	835	2
Oct		28	546	Die «grosszügigen» Abfindungen sind nur Almosen	1'127	2
Dec		9	554	Den Täter ausschaffen	512	1

19	557	Darauf sollte nicht verzichtet werden	1307	2
27	558	Lehren für den Wahlkampf	205	1
27	559	Die Vögel drohen auszusterben	978	2

TABLE 7: OVERVIEW OF THEMATIC DEBATES THROUGH TIME

Year	Themes		
	<i>Nuclear Power and Phase-out</i>	<i>Environment and Renewables</i>	<i>Mobility</i>
2006	<ul style="list-style-type: none"> • Movement 'AKW: Nein Danke', initiated by NGOs and the GPS • Manifestations in commemoration of Chernobyl and Kaiseraugst 	Industrial and institutional intent of investing in renewables	
2007		The issue of climate change portrayed as of national importance	
2008		Council and parliamentarian discussion over the construction of gas power plants	
2010	Popular vote in Bern city in favour of a communal nuclear phase-out		
2011	<ul style="list-style-type: none"> • Fukushima nuclear power reactor catastrophe • Immediate suspension of the reconstruction of Mühleberg 2 • Safety concerns and distrust over Swiss nuclear power plants 	<ul style="list-style-type: none"> • Formation of the Interest Group 'Cleantech Aargau' • Local incentives for installing renewable energy appliances • Local quarrels over the installation of renewable power plants 	
2015	Beznau 1 back in operation after three years of maintenance issues	<ul style="list-style-type: none"> • Paris Agreement on Climate • Swiss sustainable Energy Strategy 2050 promoted in Canada 	
2016	Clash of strong opinions over the 'nuclear exit initiative'	Backlash over the 'green economy initiative'	
2017	<ul style="list-style-type: none"> • Political conflict of interest in the Axpo advisory board • Deliberation of the Energy Act 	Deliberation of the Energy Act	Denounced absence of policy measures on motorised mobility
2018		<ul style="list-style-type: none"> • Revision of Argovian Energy Act • Local tax on fuel-heated houses • Scandal of fraudulent unreleased awareness campaign 	Local best practices of using electric vehicles
2019		<ul style="list-style-type: none"> • Extinction Rebellion Happenings and Climate Strikes • Local quarrels over the installation of renewable power plants 	High potential of electric and hydrocarbon cars unveiled

FIGURE 12: TIMELINE OF MAIN ENERGY TRANSITION-RELATED NEWS.



Legend: The news are sorted according to their date of publication and their geographical reach into four categories: “local”, referring to the canton of Aargau, “regional” to its neighbouring cantons, “national” to governmental happenings and “international” to foreign affairs. The grey-coloured items between 2012 and mid-2015 were included with the assistance of the website ‘Chroniken der Schweiz’ that summarises past and current Swiss and international events (Jud, 2019)

FOOTNOTES APPENDIX

- ⁱ As Swiss-German content is employed to fulfil the empirical research, we use the corresponding German acronyms of political parties for the sake of uniformity with the material of reference.
- ⁱⁱ Weirs already were in function way before the industrialisation for diverse purposes aside from energy generation, for instance flood prevention, controlled irrigation and drinking water supply (Kaiser, 2017). However, the first barrage dam built for electricity purposes was commissioned by the Confederation (Marek, 2014).
- ⁱⁱⁱ “Energy transition” is meant to be similar to energy “transformation” or “revolution”, a disruptive or radical transformation of both technology and social practices (Sovacool, 2015). Moreover, the word ‘Energiewende’ supposedly substituting ‘energy transition’, has a semantically different and even stronger significance than its Latin counterparts. ‘Wende’ goes beyond the principle of transition, putting the emphasis rather on the notion of a turning point, a switch or even a reversal of energy policy. In this effect, the term takes a more radical nuance, less that of an assumingly gradual transformation (Grunwald, 2012). Furthermore, it is notable to mention how discourses in which the notions of energy “transition” or “turn” are mobilised, indicate that existing regimes are called into question. These discourses are not only referring to a desired change of regime, but also referring to a change already in progress. Semantically however, these utterances do not specify the extent by which this process is occurring (Aykut/Evrard, 2017).
- ^{iv} This number corresponds to the quantity of documents labelled as such by the Factiva database, without considering individual statement issued in the readers columns. If every recorded letter to the editor were independently counted, the quantity of analysed article would amount to 541.
- ^v It may be noteworthy to mention here that except for the raise of keyword occurrences in 2011, every other regional newspaper explored for the sake of this raised question had a different frequency pattern.
- ^{vi} It is to be noted that both this voting item and the municipal one in 2010 were highly polemical and only obtained a slight majority of 51-52% (Kanton Bern, 2011).
- ^{vii} “Arena” is a Swiss-German talk show covering current domestic policies.