University of Tartu

Faculty of Social Sciences

Institute of Social Studies

Chair of Sociology

Silver Sillak

What hinders energy transitions? The impact of climate change on the destabilisation of the oil shale industry in Estonia

Master's Thesis

Supervisor: Laur Kanger, PhD

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1. Introduction

Contemporary societies face unprecedented environmental challenges one of which is the problem of climate change. Global warming caused by the continued emission of greenhouse gases will likely have a severe and irreversible impact on societies if substantial action is not taken (IPCC 2014). Overcoming issues like this calls for radical system-wide changes in unsustainable sectors, for example in national systems of energy provision that are based on the exploitation of fossil fuels. In the energy sector, these changes would mean cutting down on the excessive reliance on fossil fuels in favour of renewable energy such as wind and hydropower, solar and geothermal energy and biofuels. However, improvement of unusustainable systems is not just a matter of technological development but involves changes in various social phenomena such as regulations and policies, consumer practices, supply markets, cultural meanings and values (Geels 2005: 1).

During the last decade, there has been an increasing amount of studies on such system transitions towards sustainability (Markard et al. 2012; Smith et al. 2010). While much of the existing research has focused on the breakthrough of new technologies, less attention has been paid to the greening of the incumbent industries, i.e. the "flipside" of the emergence of novelty (Turnheim 2012: 1). However, there is a need to understand how the destabilisation and reorientation of unsustainable industries unfolds because they are often not susceptible to change due to fossil fuel lock-in caused by sunk investments, institutional commitments and entrenched practices (Unruh 2000).

This is the case in Estonia where the principles of national energy provision have remained almost the same in spite of major destabilising economic, social and environmental pressures (Holmberg 2008). The Estonian energy system is still heavily dependent on oil shale as an energy source: about 85% of electricity is produced from oil shale and the overall share of oil shale in primary energy supply is around 75% (Statistikaamet 2016a). Oil shale usage has a large negative impact on the environment as producing energy from it emits twice as much greenhouse gases than from conventional fossil fuels (Cleveland and O'Connor 2011). Largely due to the impact of the oil shale industry, Estonia has one of the biggest ecological footprints per capita in Europe (Global Footprint Network 2016). At the same time, the Energy Return on Investment (EROI) for shale oil is considerably lower than for traditional liquid fuels, with some studies estimating the value to be as low as between 1:1 and 2:1 when internal energy is included as an energy cost (Cleveland and O'Connor 2011; Hall et al. 2014).

The aim of this thesis is to explore the impact of climate change and other external pressures on the destabilisation of the oil shale industry in Estonia from 1995 to 2016. While previous studies on industry destabilisation have found that external pressures tend to lead to the reorientation of the incumbent industry towards new markets or the dissolvement of the incumbent industry and the breakthrough of new industries, the Estonian case presents a deviant example. The case thus enables to explore to what extent the destabilisation of the industry has been influenced by local geographical ties which is a topic that has not been studied before. This offers valuable insights for improving on existing theory as well as implications for designing policies for sustainable development.

The thesis is structured as follows: in chapter 2, I provide an overview of existing research on industry destabilisation and present an original theoretical perspective. Chapter 3 describes the research design, data and methods of the case study. Chapter 4 presents the results of the case study structured as a narrative. The results are analysed in chapter 5 which also offers implications for further research and policy recommendations. The thesis ends with references and technical appendices.

I am very grateful to Laur for sparking my interest in sustainability transitions and pushing me to my limits. Most of all, though, I want to thank Kerli for always being there for me and teaching me the most important things in life that I never learned in school.

2. Theoretical framework

The theoretical framework of this study is described in this chapter. First, I present a brief overview of the most relevant and recent models of industry destabilisation. After that, I move on to some shortcomings of the existing models with regard to the research problem of this thesis and offer ways to build on existing theory from the literature on the geography of sustanaibility transitions. I then present a possible synthesis of the two branches of literature that could help explain the role of local geographical context in industry destabilisation. The chapter ends with the research questions of this thesis.

2.1. Industry destabilisation

2.1.1. Industry regime and external environments

Recent case studies on industry destabilisation have relied on the same underlying framework called the Triple Embeddeness Framework (Geels 2014a). According to this approach, incumbent industries operate at the level of "industry regime" which refers to the "set of industry-specific institutions that enable and constrain the behaviour and action of industry actors" (Turnheim 2012: 52-53). Industry regimes consist of:

- functional-cognitive elements such as technical knowledge and capabilities;
- cultural-cognitive elements such as industry mindsets and cognitive frames;
- normative elements such as the values, identity and mission of an industry;
- formal-regulative institutions such as regulations, policies, laws and standards (Geels 2014a: 266-267).

The firms-in-industries are embedded threefold in the industry regime as well as two external environments (figure 1). As for the external environments, firms-in-industries face pressures from the economic environment which involve suppliers as well as users and consumers. Alternatively, the economic environment might be conceptualised as a "task" environment that includes organisations and actors that are in direct commercial transactions with the industry and thus form a "closer layer" (Suarez and Oliva 2005: 1019). However, firms-in-industries also have to deal with broader pressures from the socio-political environment which involves policymakers as well as the civil society. This constitutes a more general, institutional layer to the industry because the mutual interactions are mostly indirect and non-commercial (Suarez and Oliva 2005: 1019).

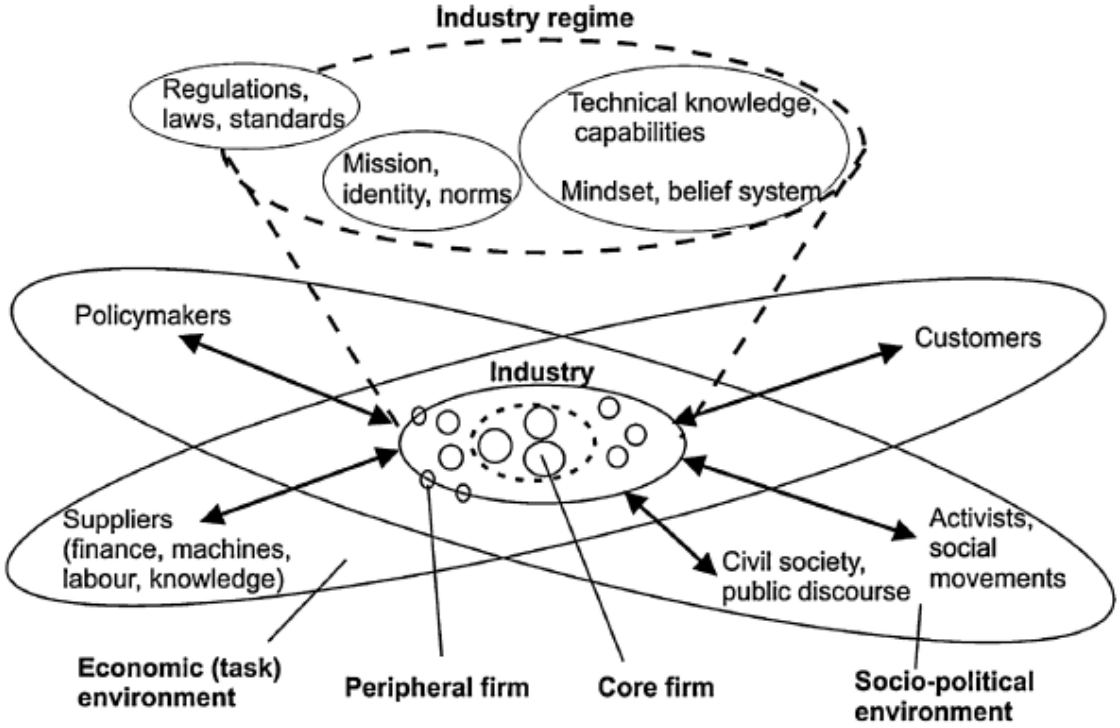

Figure 1. Industry regimes and external environments (Geels 2014a: 266).

From these environments, different kinds of pressures may emerge that contribute to the destabilisations of industry regimes:

economic pressures

- generating from changing demand such as the shrinking market size and demand due to technological competition in products;
- generating from changing supply such as the availability of resources for production, process innovation and technological competition in products;

socio-political pressures

- generating from civil society such as changes in societal beliefs and public discourse and normative contestation by protest groups and specialized activist organisations;
- generating from policymakers such as changes in policies regulating and supporting industries (Turnheim 2012: 56-57).

The common regime elements provide stability to the firms in the industry and protect them from external pressures. Industry destabilisation can therefore be described as the process of weakening reproduction of core regime elements (Turnheim and Geels 2012: 35). For example, destabilisation occurs when firms in the industry make substantial changes in their production technologies or their mission and identity.

2.1.2. Stage-models of industry destabilisation

For conceptualising the unfolding of industry destabilisation, Turnheim (2012: 60-63) has developed an ideal-typical heuristic stage-model of problem unfolding and subsequent strategic responses by the industry that consists of five stages:

1. as problems emerge, industry actors fail to pay adequate attention to the problem and downplay or deny the issue. Commitment to the regime remains strong and "business as usual" continues;
2. as problems can no longer be denied, industry actors start to implement small changes such as tighter controls, domain defence, incremental innovations or early diversification;
3. when problems increase, industry actors delve into exploration and diversification while beginning to doubt the viability of the regime;
4. as the crisis becomes urgent, industries descend into full destabilisation and decline. This can lead into
    a. re-orientation: substantial change in peripheral rules (technical and knowledge base, regulations) i.e. finding new means for doing things or
    b. re-creation: radical change in the identity, mission and values i.e. defining new ways of being.
5. the failure to address cumulating pressure is followed by dissolution and collapse while the industry actors resort to downsizing and "milking" the assets.

While Turnheim's stage-model focuses more on the internal dynamics of the industry regime, Penna and Geels (2012, 2015) have developed the Dialectic Issue Lifecycle Model (DILC) that accounts more in-depth for the interplay between the regime and the external environments. The DILC describes the actions of different groups of industry-external actors in each stage, including 1) activists and social movements, 2) policymakers and 3) consumers and suppliers (Penna and Geels 2015: 1031-1032). The unfolding of destabilisation follows a similar logic to the previous model:

1. the issue is first framed by social activists while industry actors fail to recognise it or downplay its importance;
2. social movements are formed that push the issue on the public agenda and give rise to public concerns. Industry actors engage in defensive responses such as "closed industry fronts" while exploring incremental technological solutions;

3. policymakers feel the pressure to become involved, creating investigative committees and organising public debates. Industry actors bring up reasons why radical change is unnecessary or impossible. They promise to implement incremental solutions while secretly hedging into radical alternatives or diversifying into new product markets;
4. new substantial legislation is introduced and implemented by policymakers. Industry actors contest the new policies while increasing investment in R&D. A new market share emerges as "moral consumers" adopt early radical alternatives;
5. changes in policies, consumer preferences or public discourse bring about the rise of new markets. Some industrial actors see this as an opportunity to reorient towards new markets while also recreating themselves with a new identity and mission related to addressing the issue at stake.

2.2. Shortcomings of existing models

2.2.1. Nonlinear sequence of destabilisation stages

Although the existing models make a valuable contribution to the research into industry destabilisation, they share some aspects that could benefit from further theoretical development. First, while both models suggest an ideal-typical linear sequence of phases and events, the authors acknowledge that in reality these processes unfold in much more complex patterns. One of the main conclusions of the previous case studies is that empirically, the issue lifecycles usually exhibit a "cyclical" path where the external pressures and industry responses move not in a linear fashion but forwards and backwards through phases (Geels and Penna 2015: 81; Penna and Geels 2012: 1018; Turnheim 2012: 1766). However, the existing DILC model does not explain the reasons why the issue lifecycle might return to earlier phases. Geels and Penna (2015: 81) claim that this is something that could be explored in further research, proposing that the reasons might include 1) ups and downs in problem-related pressure, 2) successful industry fight-back, 3) changing macro-level (landscape) contexts and 4) paradigmatic change in the problem framing. In addition, Turnheim (2012: 317-318) suggests that 1) political intervention (or the lack of it) and 2) multi-level embeddedness of industries might be crucial in explaining the unfolding of the phases in industry destabilisation. Geels (2014b: 26-27) also suggests that industry actors tend to have a big influence on policy by forming close alliances with policymakers.

2.2.2. Geographical variation in destabilisation

Secondly, with regard to research into sociotechnical transitions in general, there has recently been a rising attention to the lacking geographical sensitivity (Bridge et al. 2013; Coenen at al. 2012,

2015; Coenen and Truffer 2012; Hansen and Coenen 2015; Murphy 2015; Raven et al. 2012; Truffer and Coenen 2012; Truffer et al. 2015). There have been mainly two different approaches to incorporating building blocks from geography into transition studies. Some authors have chosen to focus on the particular relations on the local and regional level while others have emphasised the importance of non-local relations that transcend established geographical boundaries (Hansen and Coenen 2015: 100-101).

In their review of the literature on the geography of socio-technical transitions, Hansen and Coenen (2015: 95-100) point to the following place-specific characteristics that might influence transitions:

- local physical infrastructure. Energy infrastructures can be assessed by several spatial features, including the degree of privatisation and the dispersion, connectivity and centralisation of the network (Bridge et al. 2013: 336);
- the visions, priorities and policies of local governments, including the coalitions they form with other parties such as industry actors (Geels 2014b: 26-27);
- informal localised institutions, including entrenched norms, values, practices and cultural discourses;
- local natural resource endowments, including the availability of natural resources as an input to energy production but also the social perceptions and cultural meanings of these resources, for example, social attachments to natural landscapes which might prevent the use of some resources;
- the role of consumers in local market formation;
- local technological and industrial specialisation

The literature on the geography of transitions also holds valuable insights for industry destabilisation as the "flipside" of transitions. However, the role of local geographical ties on industry destabilisation has not been explored in previous studies. Background knowledge about the case of the Estonian oil shale industry suggests that these place-specific factors might be among the reasons for the nonlinear unfolding of industry destabilisation. I therefore conclude that there is a need for a theoretical framework that would encompass the dimension of local factors in the models of industry destabilisation.

2.3. Landscape context and local embeddedness of industries

Several different notions have been used to conceptualise the local geographical aspects of transitions. Murphy (2015: 77-81) has used the notion of "landscape context" to refer to the structural and subjective/cognitive ways in which sociotechnical regimes are embedded in specific places. The notion of "landscape" was initially introduced in transition studies with reference to the relatively stable social structure and historical context in which processes of technological change are embedded. The notion has been used both in the literal sense, referring to the material geographical context, or in the metaphorical sense, referring to the role of culture in sustaining the use of certain technologies (Rip and Kemp 1998: 328). As Bridge et al. (2013: 335) note, "landscape not only refers to the material features of a particular setting, but also implies the cultural evaluations and emotional attachments that people load onto these material forms".

Alternatively, Truffer and Coenen (2012: 9-11) have suggested that industry regimes enjoy various territorial, social and cultural advantages that arise from the "socio-spatial embeddedness" in the geographical context. Similarly, Bridge et al (2013: 336) make the claim that "how new energy technologies spread across space often depends on how these technologies (and the natural resources upon which they are deployed) are embedded in (national) systems of signification and cultural routines". The notion of "embeddedness" was originally introduced in economic sociology and economic geography to refer to the ways in which economic action is constrained by wider social relations and material structures (Granovetter 1985). In his critical review of the concept, Hess (2004: 176-177) has distinguished between three main types of embeddedness:

- societal embeddedness: the influence that the social and cultural background of the actors has on their action;
- network embeddedness: the involvement of the actor in a social network, i.e. a structure of relationships among a set of actors regardless of their local anchoring in particular places;
- territorial embeddedness: the extent to which an actor is "anchored" in particular territories or places.

I propose that Hess's framework is a useful tool for analysing the local embeddedness of industries because it is broad enough to encompass all the main place-specific factors:

- local physical infrastructure is a form of territorial embeddedness;
- the visions, priorities and policies of the local government, including the coalitions they form with other parties, e.g. industry actors might be forms of societal as well as network embeddedness;
- informal localised institutions are a form of societal embeddedness;

- local natural resource endowments are a form of territorial embeddedness while social attachments to natural landscapes are a form of territorial as well as societal embeddedness;
- the role of consumers in local market formation and local technological and industrial specialisation are forms of societal as well as network embeddedness.

It is also evident that the place-specific factors covered by the notion of embeddedness overlap with what is meant by the notion of landscape context (local material, social and cultural structures). I thus conclude that Hess's framework of embeddedness is a useful all-encompassing tool for analysing the geographical aspects that may influence the unfolding of industry destabilisation.

2.4. Industry destabilisation and local embeddedness: two mechanisms at play

Building on the two branches of literature, I propose that industry destabilisation can be concpetualised as a combination of two separate mechanisms where external pressures clash with the local embeddedness of the industry. I now present these two mechanisms and explain their relevance for explaining the particular case.

According to the first mechanism (table 1), external pressures emerge from 1) the framing of a problem by activists and 2) organization into movements and raising public concerns. Organized political lobbying might lead to 3) early political debates and discussions. Subsequently, 4) the growth of the alternative market niches and the implementation of new substantive policies is likely to result in 5) changes in economic frame conditions. Accordingly, industry actors respond by 1) denying or downplaying the problem and 2) defending their domain by organizing into closed fronts. They are likely to introduce incremental changes while 3) portraying radical solutions as unfeasible. However, they might secretly hedge by investing into alternatives. New substantive policies are likely to be 4) opposed while searching for ways of diversifying into new markets. When problems become insurmountable, industry actors either 5) reorient towards new markets, re-create themselves or dissolve.

Table 1. Mechanism of external pressures and industry destabilisation.

Phases	**External pressures**			**Industry**
	Activists and social movements	**Policymakers**	**Consumers and suppliers**	
Phase 1	problem framing			problem denial or downplaying
Phase 2	1) organization into movements, 2) raising public	1) expressing concerns, 2) creating		1) organization into closed industry front,

	concerns	informal committees		2) domain defence by contestation, 3) incremental innovation
Phase 3	organized framing and political lobbying	engagement in political debates and formal hearings	early demand from "moral" consumers	1) radical solutions portrayed as unfeasible, 2) defensive hedging
Phase 4		implementation of substantive policies	growing "moral" market niches	1) opposition to policies, 2) diversification
Phase 5		policies influence economic frame conditions	changes in mainstream preferences	1) re-orientation or 2) re-creation or 3) dissolution

With regard to the second mechanism (table 2), there are three main forms of local embeddedness of industries. Firstly, industries can be societally embedded which means that industry actors are influenced in their action by their societal, cultural and political background. Secondly, they may be territorially embedded which means that industry actors become constrained by the material/physical, economic and social conditions that already exist in particular places. Thirdly, they might exhibit network embeddedness which means that industry actors develop trusting relationships with policymakers that mutually influence their strategies and actions.

Table 2. Mechanism of local embeddedness of industries.

Dimension of embeddedness	Entities and activities
societal	industry actors are influenced in their action by their societal, cultural and political background
network	industry actors develop mutual trusting relationships with policymakers
territorial	industry actors become constrained by the material/physical, economic and social conditions that already exist in particular places

Following these models, I hypothesise that the impact of external pressures on the destabilisation of the industry is altered and/or neutralized by local embeddedness. This hypothesis forms the basis of the research questions. The case study on the destabilisation of the Estonian oil shale industry is used to answer these questions.

2.5. Research questions

Based on the research problem and the theoretical framework, the aim of this thesis is to answer the following research questions:

1. In what ways is the Estonian oil shale industry embedded in the local landscape?
2. What is the combined effect of external pressures and local embeddedness on the destabilisation of the Estonian oil shale industry from 1995 to 2016?

3. Research design, data and methods

3.1. Research design

3.1.1. Case study

This thesis will focus on the impact of climate change on the destabilisation of the Estonian oil shale industry in the period 1995-2016. As this is a complex process unfolding over a long period of time, the research will follow the longitudinal case study design. According to Yin (2003: 13-14), a case study is an empirical inquiry that 1) investigates a phenomenon within its real-life context, 2) relies on multiple sources of evidence and 3) benefits from prior theory development to guide data collection and analysis. A longitudinal case study also involves a temporal perspective by studying the same case over an extended period of time (Yin 2003: 42). The case study design is useful for identifying operational links needing to be traced over time and enables to deal with a full variety of evidential sources beyond what is possible in conventional historical research (Yin 2003: 6-8).

3.1.2. Estonian energy system and the oil shale industry

The Estonian energy system is heavily dependent on oil shale as an energy source. About 85% of electricity is produced from oil shale and the overall share of oil shale in primary energy supply is around 75% as depicted on figure 3 (Energiatalgud 2016; Statistikaamet 2016a). Another distinctive aspect of the energy system is the degree of centralization, both in political and geographical terms. The main energy supplier is the state-owned Eesti Energia which provides over 90% of the electricity produced in Estonia (Eesti Energia 2017). In addition, the main power plants in Estonia are all situated in the north-eastern part of the country near the Russian border (figure 2). Of the three of the biggest power plants in Estonia, the Eesti and Balti power plants are situated in or around the city of Narva while the new Auvere power plant lies in the village of Auvere about 20 km to the west.

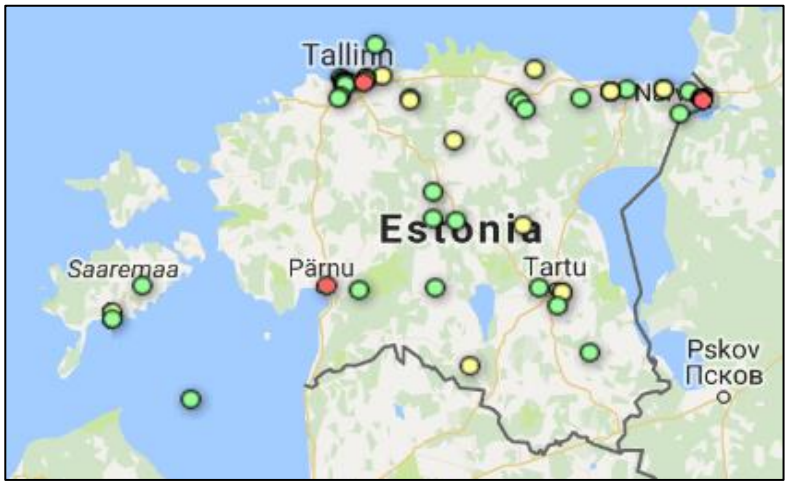

Figure 2. The location of power plants in Estonia (Energiatalgud 2016).

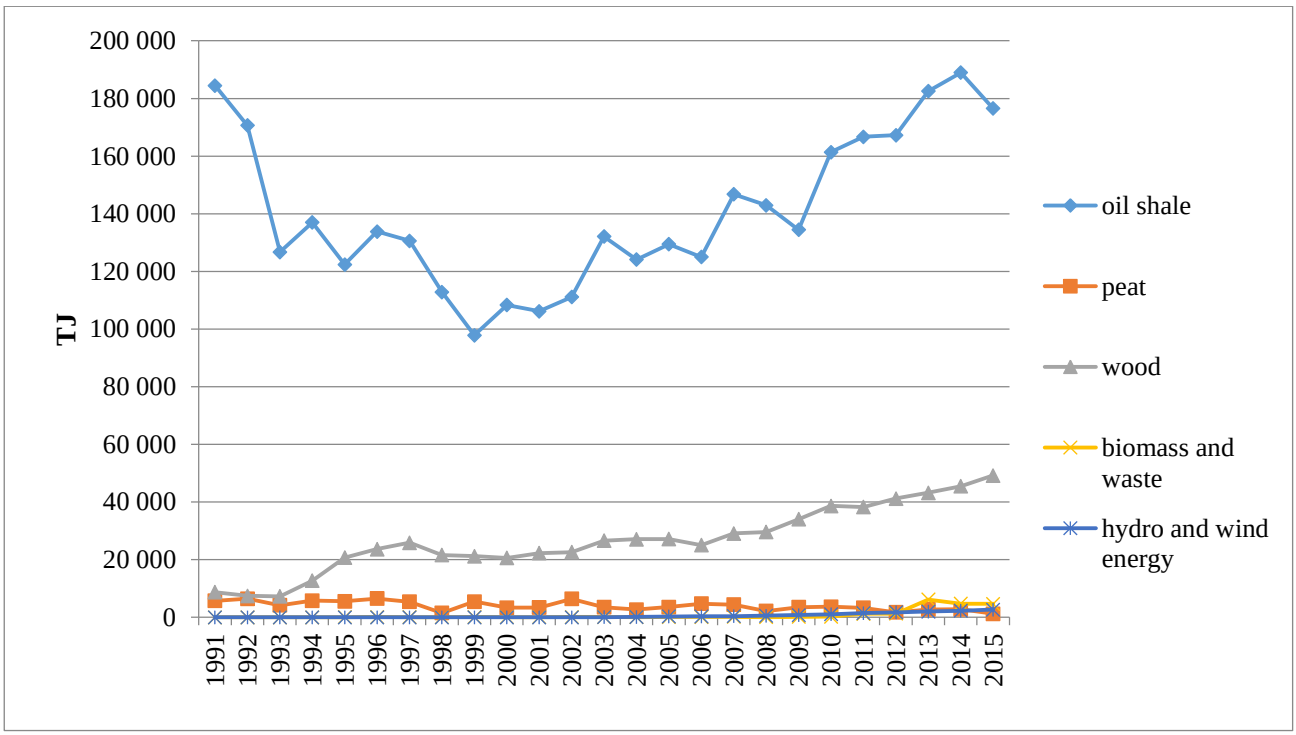

Figure 3. Primary energy supply in Estonia from 1991 to 2015 (Statistikaamet 2016a).

The oil shale industry, however, is not limited to the energy sector. As depicted on figure 4, there are several others uses for oil shale in addition to power generation. Oil shale is used for the production of shale oil and other fuels as well as chemical products. Building materials such as blocks and cement are made from the by-products of oil and power generation.

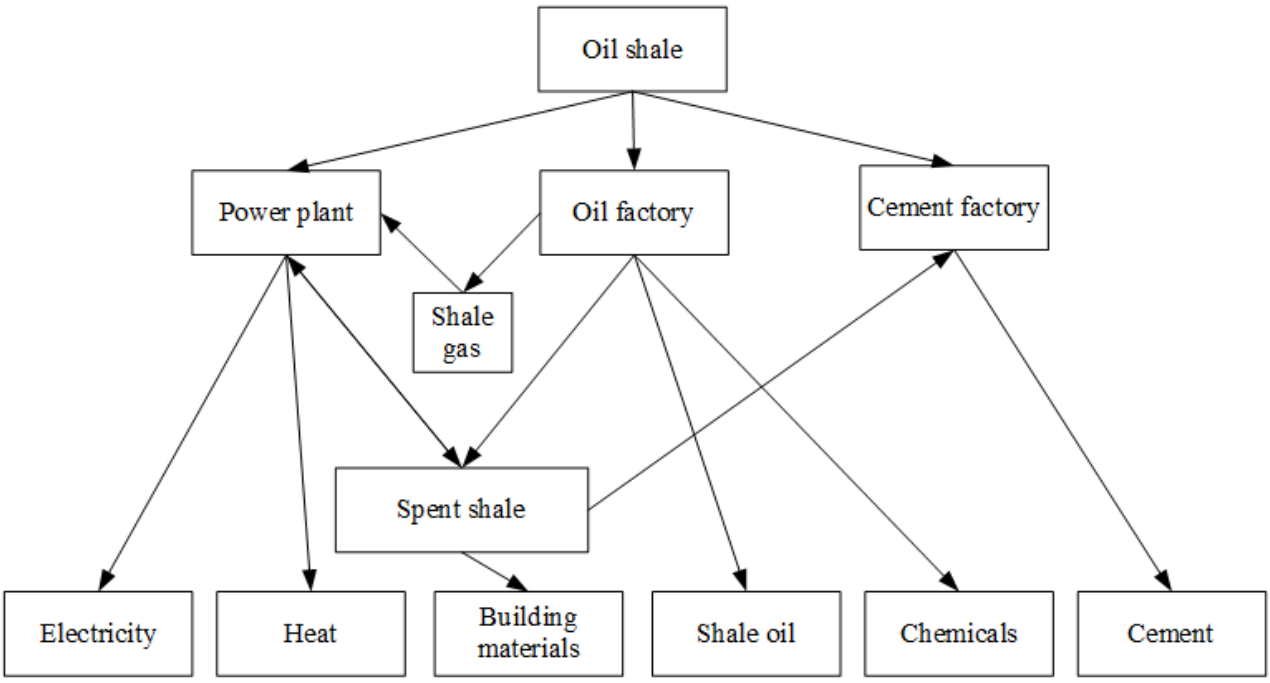

Figure 4. Industrial usage of oil shale (KPMS 2015).

Accordingly, the companies in the oil shale industry are not occupied in the energy business only and most of them have several subsidiaries in different sectors (table 3). While Eesti Energia is the main energy supplier, its other activities include oil production, the development of new technologies, network maintenance and supply and mining. The fields of activity of the Viru Keemia Grupp (VKG, formerly Kiviter) are similarly diverse, including the production of oil and chemicals, mining, logistics, network maintenance and supply and the repair and assembly of technological equipment. In 2016, one of the subsidiaries of VKG was sold to a foreign company and subsequently renamed to Roclite OÜ. The company uses spent shale to produce building blocks. Among the companies in the oil shale industry are also Kiviõli Keemiatööstus (formerly a subsidiary of Kiviter) which is in the oil and energy business and Kunda Nordic Tsement which produces cement from spent shale. With regard to geographical locations, it is appropriate to point out again that nearly all of the production facilities of all the companies are situated in the Ida-Virumaa region.

Table 3. Companies in the oil shale industry.

Company	Ownership	Subsidiaries	Fields of activity	Locations
Eesti Energia	state-owned	Elektrilevi OÜ	network maintenance and electricity supply	across the country
		Enefit Kaevandused AS	mining	Jõhvi
		Enefit Energiatootmine AS	energy production	Narva, Auvere
		Enefit Taastuvenergia OÜ	renewable energy production	Virtsu, Aulepa, Narva, Paldiski, Valka
		Enefit Solutions AS	technology and equipment for oil and energy production	Jõhvi
		Enefit Outotec Technology OÜ	oil and energy production	Tallinn, Auvere
		Pogi OÜ	renewable energy production	Paide
Viru Keemia Grupp (formerly Kiviter)	private	VKG Oil AS	oil and chemicals production	Kohtla-Järve
		VKG Kaevandused OÜ	mining	Ojamaa
		VKG Transport AS	logistics	Kohtla-Järve
		VKG Energia OÜ	electricity production and supply	Kohtla-Järve
		VKG Soojus AS	heat production and supply	Kohtla-Järve
		Viru RMT OÜ	repair and assembly of technology and	Kohtla-Järve

			equipment	
		VKG Elektrivõrgud OÜ	network maintenance and electricity supply	Narva
Roclite OÜ (formerly VKG Plokk OÜ)	private	-	production of building materials	Ahtme
Kiviõli Keemiatööstus (formerly RAS Kiviõli and Kiviter)	private	-	oil and energy production; mining	Kiviõli
Kunda Nordic Tsement	private	-	cement production	Kunda

3.1.3. Case selection

The case has been selected because it is a deviant case (Seawright and Gerring 2008: 302). A case is deviant if, by reference to a general theoretical understanding, it demonstrates a surprising and anomalous value. In other words, a deviant case is one for which the existing theoretical model or causal mechanism does not offer a sufficient explanation. The reason for studying deviant cases is that they help to uncover new causal factors or mechanisms and develop alternative explanations. Seawright (2016: 86-87) even goes as far as to say that deviant cases are the most useful cases to choose for case study analysis precisely because they enable to find omitted variables and mechanisms and discover unknown causal pathways. Choosing a deviant case allows me to explore whether there is a previously unknown causal mechanism influencing the outcome of the process and thus build on existing theories of industry destabilisation.

In order to understand in which way the case of the Estonian oil shale industry is deviant, let's consider the following:

1. first of all, climate change constitutes a strong globally perceived pressure with wide-ranging implications on the environment and the conventional lifestyles of citizens of Western societies. It was acknowledged as a serious threat by policymakers in the late 1980s and early 1990s with the establishment of the Intergovernmental Panel on Climate Change and the United Nations Framework Convention on Climate Change (UNFCCC 2014). By ratifying the Kyoto protocol in 2002 and joining the EU in 2004, Estonia too has agreed to take action against climate change. The issue has subsequently entered the public agenda due to increasing coverage by news media outlets (figure 5) which has also influenced public opinion, with climate change being perceived by Estonians as the second biggest global environmental concern (Turu-uuringute AS 2010: 8);

2. furthermore, the world has seen a remarkable growth in the installation of renewable energy technologies such as wind turbines and solar panels in the past few years (IEA 2016). Renewable power generation is becoming more cost-effective rapidly and can already compete with fossil fuels without financial support where good resources and cost structures exist, especially if we include the externalities of fossil fuel usage on the environment and on people's health (Amin 2015: 9-11). Delucchi and Jacobson (2011) suggest that it would be technologically and economically possible to generate all global energy from renewables by 2030 and that the obstacles that remain are mainly social and political. According to the Estonian Renewable Energy Association, a transition to 100% renewable energy use for Estonia by 2030 would also be both technologically possible and economically beneficial (Eesti Taastuvenergia Koda 2011);
3. the resilience of the incumbent regime to external pressures is low because oil shale is a relatively sub-optimal source for energy production. The Energy Return on Investment (EROI) for shale oil is considerably lower than for traditional liquid fuels, with some studies estimating the value to be as low as between 1:1 and 2:1 when internal energy is included as an energy cost (Cleveland and O'Connor 2011: 2319; Hall et al. 2014: 143). At the same time, oil shale usage has a larger negative impact on the environment as producing energy from it emits twice as much greenhouse gases than from conventional fossil fuels (Cleveland and O'Connor 2011: 2313). Largely due to the impact of the oil shale industry, Estonia has one of the biggest ecological footprints per capita in Europe (Global Footprint Network 2016);
4. considering the extent of the external pressures and the low resilience of the regime, we should be seeing a substantial reorientation of the incumbent regime or a successful transition towards a sustainable energy system. However, in reality the pressures on the Estonian oil shale industry have only led to incremental change in the national energy system over the years, with 75% of primary energy still being produced from oil shale (figure 3). As for renewables, the most used energy source is wood (mainly wood chips and pellets) which also has a relatively low EROI and is being processed in the same power plants as oil shale. Despite the ambitious scenarios proposed by the Estonian Renewable Energy Association, the latest National Development Plan of the Energy Sector foresees only a modest rise in the share of renewables, with 28% of primary energy consumption and 45% of total energy consumption coming from renewables by 2030 (Majandus- ja Kommunikatsiooniministeerium 2016).

3.1.4. Process-tracing

In conducting the longitudinal case study, I will rely on process-tracing as "the most important tool of causal inference in qualitative and case study research" (Mahoney 2012: 571). Process-tracing involves identifying causal mechanisms between an observed cause (in this case climate change) and outcome (in this case industry destabilisation) of a process (Beach and Pedersen 2013: 1). A causal mechanism can be defined roughly as "a complex system which produces an outcome by the interaction of a number of parts" (Glennan 1996: 52). Every part of a causal mechanism should consist of 1) some entities (e.g. policymakers) and 2) the activities that they undertake (e.g. introducing and implementing legislation) (Beach and Pedersen 2013: 14; Hedström and Ylikoski 2010: 51).

Process analysis is fundamentally different from the more conventional way of studying social change which has been called the "variance approach" (Langley 1999; Poole 2004; Van de Ven and Engleman 2004). While variance analysis explains change in terms of relationships between dependent and independent variables by means of statistical models, process analysis focuses on the sequence of events and the patterns among them that connect causes to an outcome. Process analysis thus enables the researcher to look into the "black box" between causes and outcomes and provide a more thorough explanation of social change.

Three different variants of process-tracing can be distinguished: theory-testing, theory-building and explaining-outcome analysis (Beach and Pedersen 2013: 13-22). In this case study, I will rely on explaining-outcome process-tracing because I am interested in explaining the observed outcome (or the lack of one) in this particular case. The question I seek to answer is thus the following: why is it that the extensive external pressures have not led to a full destabilisation of the industry? Explaining-outcome process-tracing is a research strategy that resembles abduction which is a combination of deduction and induction (figure 4). The deductive part consists of deducing a theoretical causal mechanism from the existing literature and testing to what extent it can account for the observed outcome. However, for deviant cases the existing mechanism is usually unable to explain the full extent of the outcome. The inductive strategy is then used to gather additional empirical evidence and build a more comprehensive explanation. It could be the case that the observed outcome is caused by multiple causes or causal mechanisms in which case explaining-outcome process-tracing is the most suitable strategy for uncovering these previously unknown mechanisms (Beach and Pedersen 2013: 20).

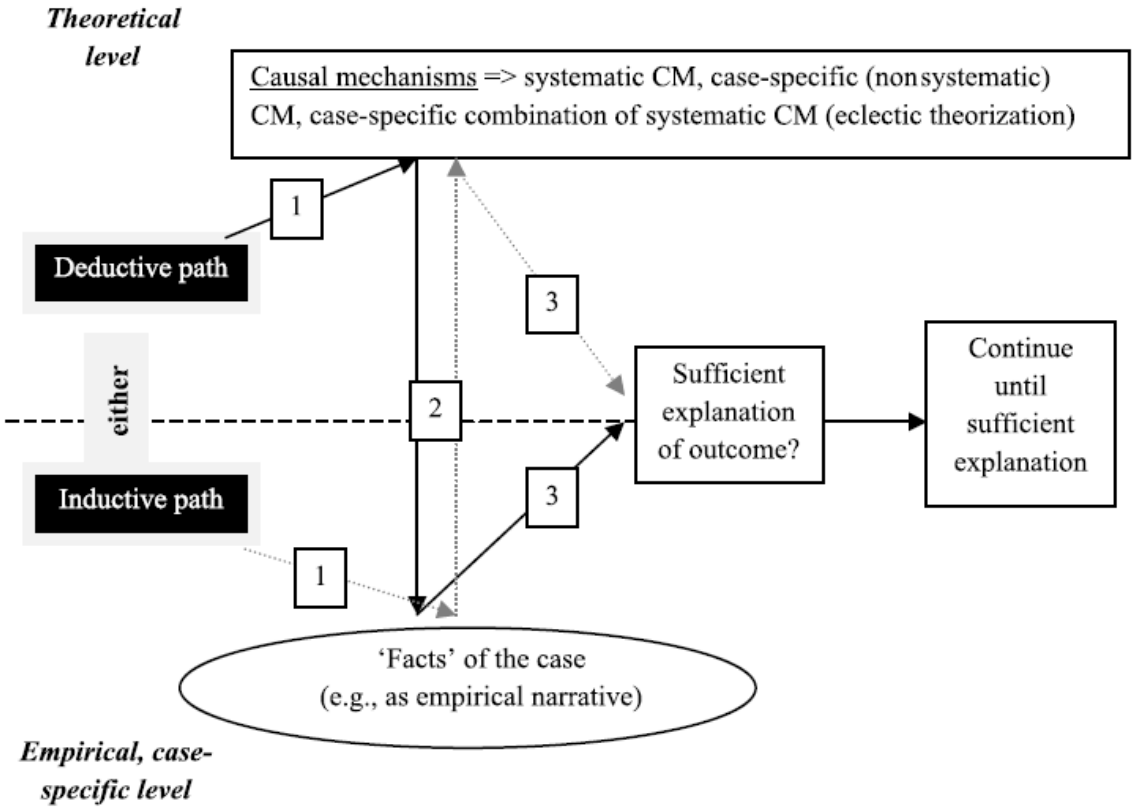

Figure 4. Explaining-outcome process-tracing (Beach and Pedersen 2013: 20).

It is reasonable to assume that "in the complex social world, most outcomes are the product of multiple mechanisms acting at the same time" (Beach and Pedersen 2013: 89). I will thus first assume that the Estonian case follows the ideal-typical model of industry destabilisation which is depicted as a five-phase process between external pressures and industry responses (table 1). In the deductive part of explaining-outcome process-tracing, I will test the empirical evidence against the model of industry destabilisation to see to what extent the case follows the model. This deductive, theory-testing part of the analysis will be followed by inductive process-tracing in which I will gather additional empirical evidence to explain the anomalies in the outcome of the process. In doing that, I will focus on the place-specific factors related to the local embeddedness of the industry that may have hindered the unfolding of industry destabilisation and negated the effect of the first mechanism. Building on Hess (2004: 176-178), I presume that industry actors 1) may have been influenced by their societal, cultural and political background, 2) may have developed mutual trusting relationships with policymakers and 3) may have become constrained by their material, economic and social surroundings (table 2). Since this is an exploratory part of the research I will make no further specific predictions about this mechanism.

The underlying assumption here is that the anomalies in the outcome of the process are caused by the two mechanisms at play here working in opposite ways and neutralizing each other's effect.

Identifying the specific ways in which the mechanism of local embeddedness works could thus lead to improvement in the existing theory on industry destabilisation by pointing to how the local embeddedness of industries can hinder industry re-orientation and sociotechnical transitions towards sustainability.

3.2. Data

3.2.1. Types and sources of data

In process-tracing, data collection is a two-step process that involves 1) gathering raw material data and 2) assessing its value and accuracy in the context of the particular case. In that way, empirical observations are turned into relevant evidence that can be used to make inferences about the presence of the causal mechanism in the particular case (Beach and Pedersen 2013: 73, 120). There are four different types of evidence:

1. pattern evidence which refers to statistical patterns (e.g. fluctuations in statistical indicators);
2. sequence evidence which refers to the temporal and spatial chronology of events hypothesized by the mechanism (e.g. observations that event A occurred before event B);
3. trace evidence which refers to evidence whose mere existence provides proof that a part of a hypothesized mechanism exists (e.g. the existence of the official protocol of a meeting provides strong proof that the meeting actually took place);
4. account evidence which refers to the content of empirical material (e.g. the content of the protocol of the meeting which details what was discussed) (Beach and Pedersen 2013: 99-100).

Different types of evidence can be collected from different types of sources. Using multiple sources of evidence also allows for triangulation which means collecting various types of evidence from several independent sources and thus increasing the reliability of the evidence (Beach and Pedersen 2013: 128). For this case study, I made use of four different sources of data:

1. the bulk of the research relied on media items found in online newspaper archives. The full list of these items is presented in Appendix D;
2. official public documents were used to gather evidence about the industry regime, activists and social movements and policymakers. The documents include 1) annual reports and yearbooks of the enterprises in the oil shale industry (Eesti Energia, Viru Keemia Grupp, Kunda Nordic Tsement*)* and the Estonian Renewable Energy Association and 2) strategies

and development plans of the Ministry of Environment and the Ministry of Economic Affairs and Communications of Estonia;

3. secondary literature was used to find additional evidence about the strategies of policymakers and industry actors;
4. statistical databases and public opinion polls were explored to make use of indicators that represent the intensity of climate-change related pressures and debates in the media as well as economic supply and demand of shale oil and renewables. The full list of documents, secondary literature and statistical databases that were used is presented in Appendix E.

3.2.2. Data collection

As for the methods of data collection, newspaper articles about environmental problems related to the oil shale industry were collected from the databases of Delfi and Postimees. For this, I conducted a Boolean search in the databases of Delfi and Postimees by combining the key words (*põlevkivi* AND *kliima*) OR (*põlevkivi* AND *keskkon**)[1]. After that, I reviewed the results of these searches and eliminated articles that were not relevant to the research problem. The 603 articles that were used have been listed in Appendix D. These articles were coded according to the coding manual in Appendix B.

Public documents were found on the websites of Eesti Energia, Viru Keemia Grupp, Kunda Nordic Tsement, Estonian Renewable Energy Association, the Ministry of Environment and the Ministry of Economic Affairs and Communications. Statistical information has been collected from the databases of Statistics Estonia (*Statistikaamet*) and Statista.

3.2.3. Limitations

There are several advantages to using newspaper items and documents as sources of evidence: 1) they are stable and can be reviewed repeatedly, 2) they are objective in the sense that they have not been created as a result of the case study, 3) they are exact and detailed and 4) they offer a broad coverage of the events (Yin 2003: 86). Furthermore, triangulating qualitative data from documents with quantitative statistics adds precision and validity to the evidence.

However, as with any research design, there are some limitations that need to be acknowledged. Firstly, the contents of newspaper items and documents have to be critically examined as they might reflect the biases of the authors. Secondly, the data collection is inevitably incomplete due to the large amounts of newspaper items available although I tried to cover as many relevant items as

[1] (oil shale AND climate) OR (oil shale AND environment)

possible over the period of 21 years. The search was conducted in two of the most popular and reliable online news portals and was systematic by focusing on the same key words. Thirdly, the case study might have benefitted from in-depth elite interviews with selected representatives of the categories of actors. The advantage of interviews is that they enable to gain evidence not usually available in the content of documents such as "insider" knowledge and information about contextual aspects and the motives of actors. However, interviews were not conducted due to constraints of time and capacity.

3.3. Methods

Although process-tracing is conceived of as a qualitative method, it can also rely on quantitative information (Collier 2011: 825). In this case study, I used both quantitative data (pattern evidence) and qualitative data (sequence, trace and account evidence). The analysis proceeded in five consecutive steps: 1) visual observation of time series data, 2) quantitative content analysis, 3) building a narrative of the process, 4) pattern-matching and 5) explaining the outcome.

3.3.1. Visual observation of time series data

By the visual observation of time series statistics, I identified overall patterns in the data and divided the process into periods according to certain continuities within a set of events and discontinuities between them (Langley 1999: 703). This was done following the example of previous case studies of this kind (Geels and Penna 2015; Penna and Geels 2015, Turnheim and Geels 2012, 2013). According to Geels (2014: 266-267), industries are operating in the economic as well as the societal environment and face pressures from both sides. I therefore used the following indicators that represented the societal and economic pressure on the industry to measure the approximate extent of industry destabilisation:

1. as the focal problem of this case study is climate change, I used the count of newspaper articles covering climate change in the two biggest online news portals in Estonia (Delfi and Postimees) from 1995 to 2016 as an indicator of societal pressure. The data was collected with a Boolean search in the databases of Delfi and Postimees by combining the key words *kliima* AND *soojene**[2];
2. as an indicator of economic pressure, I used the average annual OPEC crude oil price from 1991 to 2016 to represent fluctuation in supply and demand for shale oil. This indicator was chosen because the competitiveness of the oil shale industry depends to a large extent on the global crude oil price (Eesti Energia et al. 2016: 23). I also used time series data about the

[2] climate AND warming

share of renewable energy in gross final energy consumption in Estonia. While this data was unfortunately available only for the years 2004 to 2013, it is still useful as it indicates the expansion of the renewable energy market niche.

3.3.2. Quantitative content analysis

The main part of the case study relies on quantitative content analysis which was carried out on newspaper items. According to Riffe, Lacy and Fico (2014: 19), "quantitative content analysis is the systematic and replicable examination of symbols of communication, which have been assigned numeric values according to valid measurement rules, and the analysis of relationships involving those values using statistical methods, to describe the communication, draw inferences about its meaning, or infer from the communication to its context, both of production and consumption". Following Hsieh and Shannon (2005: 1281), I used the method of directed content analysis. This kind of content analysis is directed in the sense that concepts from existing theory are used as initial coding categories that "direct" the coding process. However, the process is not limited to pre-existing codes only. Data that cannot be coded with the initial categories is coded in an open-ended manner (Hsieh and Shannon 2005: 1282). These codes are later systematized into broader categories by means of induction.

The strength of directed content analysis is that is can be used for both validating and extending the existing theory. Moreover, the procedure allows for a comprehensive analysis of existing data as it combines both the deductive and the inductive ways of coding. This approach is especially relevant for explaining-outcome process-tracing in which the researcher has to use both deductive and inductive techniques of analysis. The weakness of directed content analysis is that the researcher will approach the data with a theoretical bias and is therefore more likely to find evidence that supports the existing theory. Moreover, as the researcher is focused on the existing theory, he or she might be blinded to the contextual aspects of the case (Hsieh and Shannon 2005: 1283). This risk is minimized by drawing on prior research as well as allowing for the coding of new contextual evidence arising from the data. The coding of the contextual evidence is done without relying on existing theory and the categories will be developed mainly in an inductive manner.

According to the procedures of directed content analysis, the coding in this study was done in two parts. The first part of the coding was deductive which means that I was looking for the presence of evidence in the data based on the mechanism of industry destabilisation. Appendix A presents the operational definitions of the mechanism that formed the basis of the coding categories. The latter are presented in Appendix B where the categories B1-B4 refer to the parts of the mechanism by

different types of actors. Data that could not be coded with the theory-based categories but was identified as relevant was coded in an open-ended manner. These codes were then systematized into broader categories by means of induction. In Appendix B, categories C1-C4 include the codes that were induced from the data after open coding. The results of the coding in the form of bar graphs are presented in Appendix C.

In addition to these substantial categories, some categories were used for coding more formal parameters of the texts such as the date, publisher and headline. An additional category was used to identify whose views were mainly presented in the article. This category refers not to the author of the text which was usually a journalist but the person or organization who the article was about and whose comments made up the bulk of the story. In the case when the article presented the views of several different people or groups (for example policymakers, industry representatives and environmental activists), all of these were included under this category. The full list of the newspaper items along with the formal parameters is presented in Appendix D. The information about whose views were presented in the articles is included in Appendix C under the category A4. This evidence was later used for explaining the outcome of the process.

3.3.3. Combining different strategies of process analysis: narratives based on temporal bracketing and visual mapping

In addition to newspaper items, evidence was collected also from documents and secondary literature. There were mainly two reasons for using different sources of data: 1) it enabled to collect additional evidence that was not found in newspaper items and 2) it allowed for triangulation and thus increased the reliability of the evidence.

Langley (1999) distinguishes between several different but complementary strategies for process analysis among which are the narrative strategy, the temporal bracketing strategy and the visual mapping strategy. In this case study, a combination of these three strategies was used to build a narrative of the process. This approach was chosen because Collier (2011: 828) claims that when conducting process-tracing, it is often useful to start with a narrative or a timeline that lists the sequence of events. The narrative strategy means that a detailed story was built from the raw data collected for the case study. A higher level of systemization of the stories was achieved by the temporal bracketing of the process into distinctive periods described in the section 3.3.1. The narrative is in part based on the visual graphical representations of the results of the content analysis of newspaper items. This kind of visual mapping allows for the simultaneous representation of large quantities of information along several different dimensions and is extremely useful for showing precedence, parallel processes and the passage of time (Langley 1999: 700). Additional evidence

from documents and secondary literature was used to confirm or disconfirm the occurrence and sequence of main events in the process identified by the content analysis. The full list of these documents, secondary literature and statistical databases is presented in Appendix E.

The advantage of the narrative strategy is that it is highly accurate, detailed and context-specific (Langley 1999: 706). The disadvantages of the narrative approach are balanced by temporal bracketing and visual mapping which offer more simplified and systematized explanatory overviews and allow for better generalization.

3.3.4. Pattern-matching and explaining the outcome

After building the narrative, I used the pattern-matching technique to compare the theoretical pattern predicted by the mechanism of industry destabilisation with the actual pattern of observed events (Seawright 2016: 177; Yin 2003: 26-27, 116). The aim of this step was to identify to what extent the case followed the theoretical mechanism of industry destabilisation and to what extent it deviated from it. As the last step, I used the remaining categories of evidence induced from open coding to test whether it could account for the deviations from the mechanism of industry destabilisaton. On the basis of the existing model and the additional evidence induced from the case, I built a more comprehensive explanation of the outcome of the process. This included the context-specific factors of local embeddedness that influenced the outcome of the process.

4. Results

The results of the analysis are presented in this chapter. Following previous case studies of this kind (Geels and Penna 2015; Penna and Geels 2012, 2015; Turnheim and Geels 2012, 2013), I start with the periodization of the case by identifying broad patterns in the process by the visual observation of time series data. Next, I present a narrative overview of every period along with a list of main events by the categories of actors. The narrative relies on 1) the visual mapping of the results of the content analysis carried out on online newspaper items and 2) additional supporting evidence collected from documents, secondary literature and statistical databases. A temporal bracketing strategy based on the previous periodization is used to systematize the narrative into four periods.

4.1. Periodization

4.1.1. Societal pressure

As an indicator of societal pressure, figure 5 depicts the number of articles on climate change in the online databases of Delfi and Postimees from 1995 to 2016. There were several reasons for choosing the year 1995 as the starting point. First, 1995 was the year of several significant events that helped raise climate change on the public agenda, for example the first annual meeting of the Conference of the Parties (COP) in Berlin and the publication of the IPCC Second Assessment Report (IPCC 2017; UNFCCC 2014). Secondly, there were no articles on climate change in the online databases of Delfi and Postimees before 1995 and only a few per year right after that which implies that the media attention to the issue in Estonia was probably quite low before 1995.

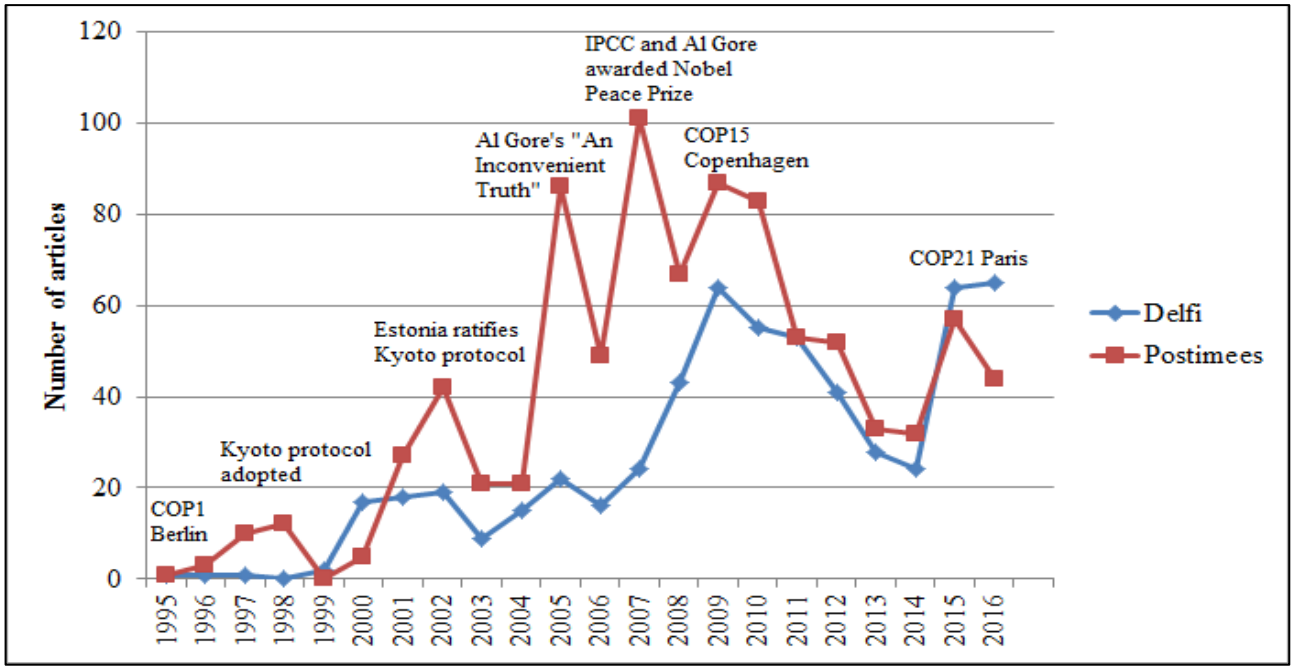

Figure 5. Number of articles covering climate change in Delfi and Postimees from 1995 to 2016.

Figure 5 also includes the most important events that significantly increased or decreased the societal attention to climate change throughout the process. The first significant rise occurred in 1997 with the adoption of the Kyoto protocol, an international treaty regulating the worldwide reduction of greenhouse gas emissions. The Kyoto protocol was ratified by the Estonian government in 2002 which led to the next substantial increase in the coverage of climate change. After a few years of reduced attention, climate change rose heavily to the public agenda again with the release of Al Gore's documentary "An Inconvenient Truth" in 2005 for which Al Gore, along with the Intergovernmental Panel on Climate Change (IPCC), was awarded the Nobel Peace Prize in 2007. The coverage of climate change in Delfi and Postimees peaked in 2009 during the 15th Conference of the Parties in Copenhagen which attracted high media attention worldwide but ended in failure as world leaders were not able to agree on common objectives. Attention to climate change subsequently decreased for several years in a row and increased again only at the end of 2015 when, at the 21st Conference of Parties in Paris, a global agreement on climate change mitigation and adaptation was finally achieved.

4.1.2. Economic pressure

As an indicator of economic pressure, figure 6 depicts the average annual OPEC crude oil price from 1995 to 2002. This indicator was chosen because the competitiveness of the oil shale industry depends to a large extent on the global crude oil price (Eesti Energia et al. 2016: 23). During that time, there have been roughly three major drops in oil price that have had an influence on the oil shale industry. These low points occurred in 1998, 2009 and 2015.

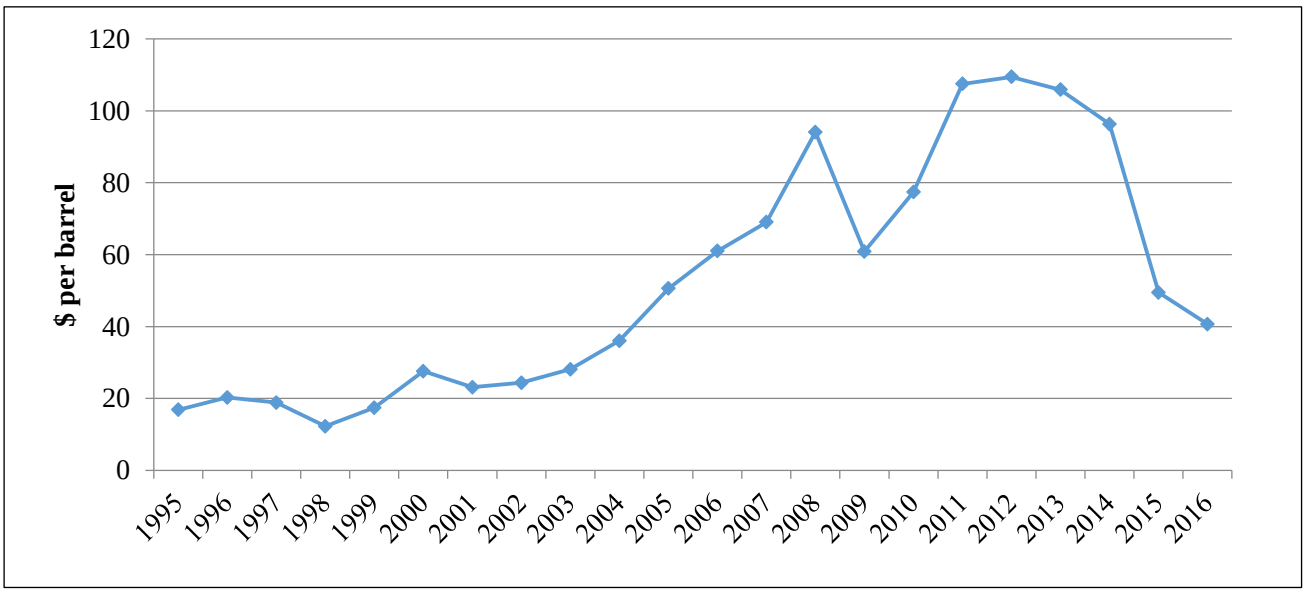

Figure 6. Average annual OPEC crude oil price from 1995 to 2016[3].

[3] Statista. Average annual OPEC crude oil price from 1960 to 2016.

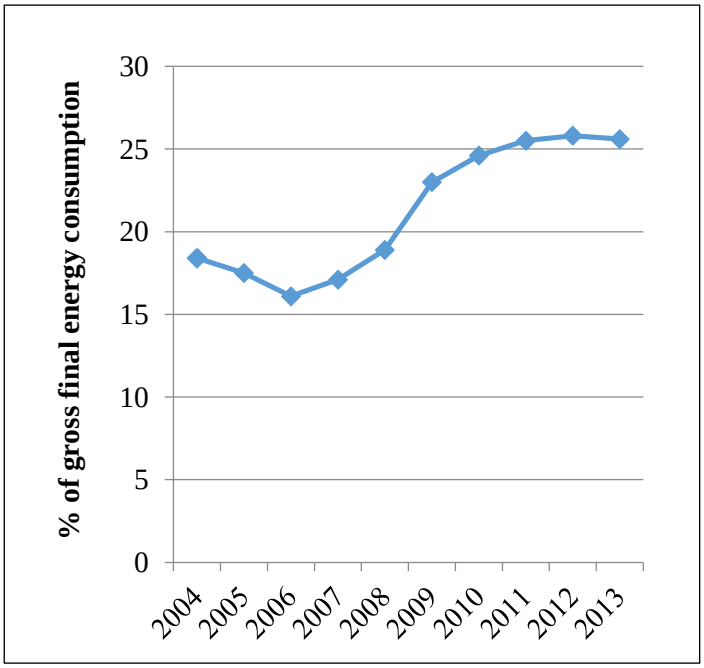

Figure 7. Share of renewable energy in gross final energy consumption in Estonia from 2004 to 2013[4].

Renewable energy provision may also mount significant pressure on the oil shale industry. Figure 7 depicts the share of renewables in gross final energy consumption in Estonia from 2004 to 2013. We can see that the consumption on renewables rose steadily from 2006 to 2011 which indicates the formation of a renewable energy market niche. This period overlaps with the rapid rise of climate change onto the political agenda in Estonia as well as worldwide.

4.1.3. Periods of industry destabilisation

Based on these three indicators and the background knowledge about the case, I have divided the process into four periods based on significant events and continuities within periods and breaks between periods. Table 6 gives an overview of the societal and economic pressures and the state of industry in each period. The first period from 1995 to 2002 saw climate change being framed as an issue for the first time in Estonia, mainly with reference to global events. The industry was troubled by low oil prices and the crisis culminated with the bankruptcy of Kiviter and rebirth as VKG. In the second period from 2003 to 2009, climate change reached the political agenda mainly due to Estonia's unification with the EU and the subsequent build-up for the COP15 in Copenhagen. The industry grew steadily because of high oil prices, experiencing only a minor shock at the end of the period due to the global financial crisis. The third period from 2010 to 2013 is characterized by a decreasing interest in climate change due to the failure of the parties to reach a global agreement in Copenhagen. The industry prospered because the oil prices were rising fast again after the shock of 2009. The societal and economic pressures aligned again in the fourth period beginning in 2014 with an abrupt drop in oil prices and the global agreement on climate change adopted at COP21 in Paris. These pressures sent the industry into crisis the results of which are still to be determined.

[4] Statistikaamet. Ökoloogiline tasakaal.

Table 6. Periods of industry destabilisation.

Period	Societal pressure	Economic pressure	State of industry
1995–2002	climate change rises to the public agenda	low oil price	industry in crisis, Kiviter goes bankrupt and is recreated as VKG
2003–2009	climate change rises to the political agenda	high oil price followed by the global financial crisis and an abrupt drop in oil price, expansion of renewable energy market niche	industry prospers, minor crisis at the end of the period
2010–2013	the failure of COP15 is followed by a decreasing interest in climate change	high oil price	industry prospers
2014–…	the success of COP21 leads to the pressure of implementing substantive policies	abrupt drop in oil price	industry in crisis, massive lay-off of employees

4.2. Results of the case study

4.2.1. 1995–2002

Table 7. Overview of the main events (1995-2002).

External pressures			Industry
Activists and social movements	**Policymakers**	**Consumers and suppliers**	
1) several competing problem framings: climate change and other environmental problems, energy security and employment issues, concerns about decreasing oil shale reserves and the nuclear energy debate; 2) environmental organizations demand higher environmental charges on the industry; 3) Estonian Green Movement presents an conception of alternative energy until 2050	1) new pollution and waste charges implemented; 2) attempts are made at the privatization of the oil shale enterprises and attracting foreign investment; 3) Estonia achieves a temporary status for the oil shale industry from the EU as part of the unification negotiations	1) heavy economic pressure hits the industry in 1998 as the oil price dropped abruptly and the Russian financial crisis decreased export sales; 2) first wind turbine mounted off the coast of Hiiumaa; 3) Eesti Energia starts offering a domestic renewable electricity package to "green" consumers	1) Kiviter goes bankrupt in 1999 and is recreated as VKG; 2) diversification at VKG: producing oil from car tires, developing new fine chemical products; 3) plans are made for renovating some of the old production facilities

4.2.1.1. Activists and social movements

In 1994, Estonia ratified the United Nations Framework Convention on Climate Change, thus becoming a member of the countries dedicated to fighting against global warming. In 1995, the first Conference of Parties (COP) was held in Berlin and in the same year, Estonia had to present its first national climate report[5]. "Climate change" first appears in the online newspaper archives in relation to the energy system in 1996[6]. The attention to climate change subsequently increased somewhat in 1997 with the international adoption of the Kyoto protocol and again in 2002 when Estonia ratified it. With this step, Estonia took on the obligation to reduce its greenhouse gas emissions by 8% in the period from 1990 to 2012. However, this obligation did not place any significant pressure on the Estonian government and the oil shale industry. The reason for this was that after Estonia gained its independence from the Soviet Union in 1991, the transition to a market economy led to the closing

[5] Eesti rollist rahvusvahelises kliimamuutuste poliitikas
[6] "Energia püsib alanud aastal maailma keskpunktis". *Delfi*, 17.01.1996.

of many of the inefficient Soviet industries and production facilities. These changes already reduced the country's greenhouse gas emissions by more than 50%. In spite of this though, Estonia still has one of the highest greenhouse gas emission rates per capita in the European Union (European Environment Agency 2016).

From the beginning of the 1990s, several different and competing issue framings in addition to climate change can be distinguished (figure 8). Among them were concerns about energy security as well as the employment issues in the Ida-Virumaa region. In addition, there were ongoing debates specific to the particular period. For example, fears about the decreasing oil shale reserves gave rise to the debate about nuclear energy as a potential replacement for oil shale as the "national" energy source[7]. This idea was backed by some scientists like Endel Lippmaa and Anto Raukas. On the other hand, environmental activists and experts like Andres Tarand, Marek Strandberg and even the president-elect Arnold Rüütel were skeptical towards nuclear energy. They argued for the advantages of renewables and proposed a direction towards the decentralization of the energy system. They also pointed to the fact that Estonia lacks an official development plan for the national energy system and a long-term strategy must be agreed upon before making any fundamental decisions[8].

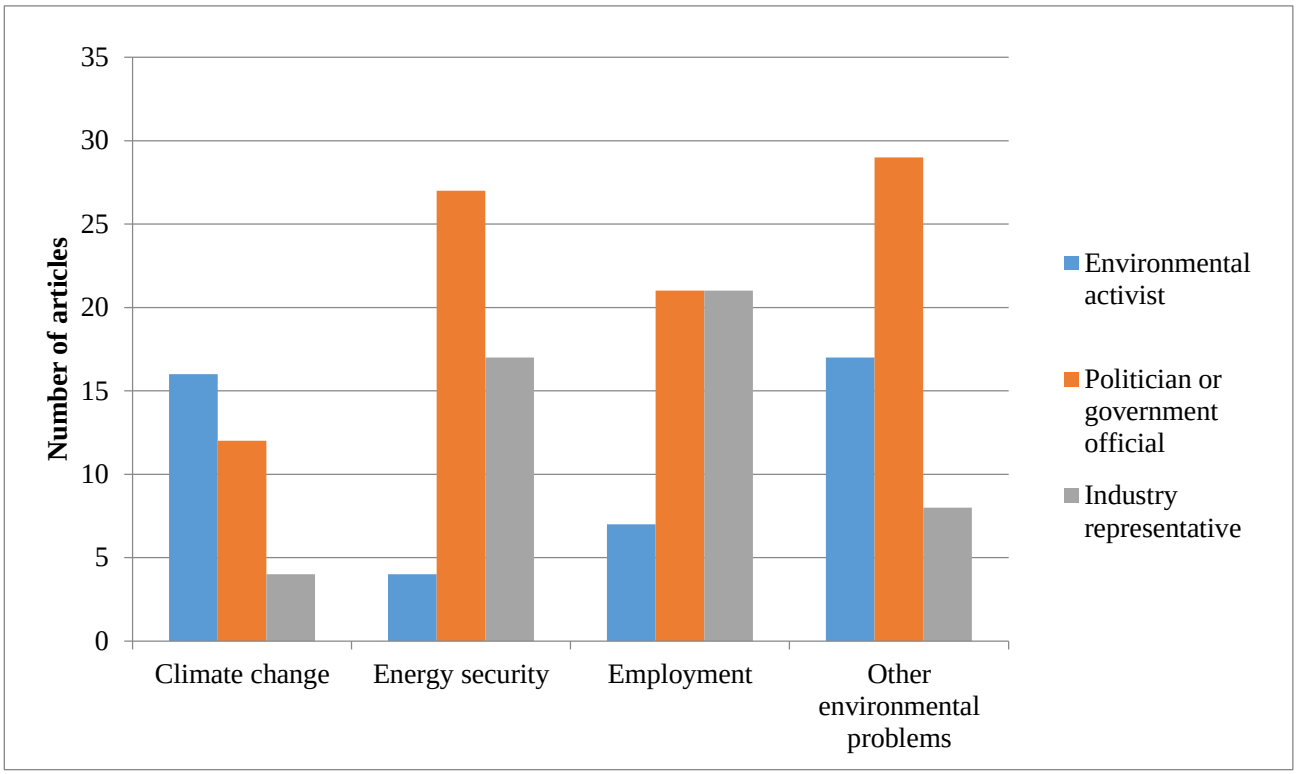

Figure 8. The importance of problems for different groups of actors in online newspaper articles of Delfi and Postimees between 1995 and 2016.

[7] "Kas toetate üleminekut tuumaenergiale?". *Delfi*, 27.11.1997.
[8] "Energeetikas arengukava enne äriplaane". *DelfiI*, 12.09.1997.

Furthermore, climate change was neither the only nor the most relevant environmental issue at the time as there were other more urgent concerns about the environmental impact of the industry. These included problems with air pollution, water contamination and industrial waste management. These concerns were the focal issues as environmental organizations like the Estonian Green Movement (EGM) and the Estonian Fund for Nature (EFN) started to make demands on the government to change the environmental charges of the oil shale industry[9]. Among the new charges planned were taxes on air pollution as well as the solid waste (spent shale) that was the by-product of the dry distillation process. Barely any attempts had been made at recycling the waste as spent shale was dumped around Kiviõli and Kohtla-Järve in big piles that eventually formed distinctive hills on the landscape of Ida-Virumaa. The problems with this solution were the contamination of groundwater, air pollution and the spontaneous combustion of the waste.

4.2.1.2. Policymakers

The industry was in a very difficult economic situation at the beginning of the 1990s due to the transition to a market economy and the government had thus made several exceptions to the industry which included applying pollution and waste charges that were 10 times smaller than the charges applied for similar toxic waste in other sectors. Due to the pressure by environmental organizations, an increase of pollution and waste charges was planned at the end of the 1990s. However, the low oil price and the Russian financial crisis did not allow for high tax rates to be introduced and the increase was not more than 5-20% annually[10].

The government was more occupied with other plans. As a heritage from the Soviet era, most of the companies in the oil shale industry like Eesti Energia and Kiviter were state-owned enterprises. In order to attract much-needed foreign investment for the renewal of the inefficient industry, the government drew up a plan of privatizing the oil shale enterprises. The first attempt at the privatization of Kiviter failed in 1996 as the government could not reach an agreement with the potential buyer over the conditions of the deal[11]. Conflicts arose over issues such as how the price of oil shale should be regulated, who bears the responsibility over the elimination of the consequences of past environmental damage and what will be the extent of future environmental taxes and charges. With the second attempt in 1997, a buyer was found when Eriõli bought 50% of

[9] "Eesti Roheline Liikumine soovitab karmistada keskkonnamakse". *Delfi,* 28.03.2000.
[10] Valdmaa, K. (2014). "Development of the environmental taxes and charges system in Estonia: international convergence mechanisms and local factors". *Policy Studies* 35, pp. 339-356; "Saastetasud tõusevad järgmisel aastal keskmiselt viiendiku". *Postimees,* 06.11.2001.
[11] Põhijooni põlevkiviõlitööstuse arengust Eestis

the shares of the company. At the same time, serious interest was also shown by the Canadian company Suncor in investing in a new oil factory in Estonia. However, this deal was cancelled as concerns emerged over the liability and the environmental impact of the technological solutions after problems with a similar project by the same company in Australia[12]. There were also negotiations over the possible sale of Eesti Energia to the US-based NRG Energy. The negotiations lasted from 1995 to 2002 but ultimately ended in failure as disagreements between and within the government, industry and environmental organizations could not be solved by the final deadline of the deal[13]. The main arguments against the deal were fears that the foreign owners would not consider the strategic interests of the country such as strengthening energy independence and reducing environmental damage[14]. These arguments were presented not only by environmental organizations but also by the Minister of Economic Affairs Edgar Savisaar and even industry representatives themselves. The failure of the deal sparked debates about the strategic direction of the Estonian energy system. A coalition of environmental organizations called for drawing up long-term national strategies for the energy system as well as the regional development of the Ida-Virumaa region based on the internationally acknowledged principles of sustainable development. The Estonian Green Movement also presented the government with a new conception for the use of alternative energy sources until 2050[15]. At the same time, there were those who claimed that nuclear energy is the only way forward and that the establishment of a nuclear power plant in Estonia is just a matter of time[16].

Also on the agenda of the government were preparations for joining the European Union. With regard to the oil shale industry, the aim of the government was to achieve exceptions from meeting some of the conditions of the environmental directives of the EU which were necessary for the survival and further development of the industry. As a result of the negotiations, the European Commission agreed to give oil shale a temporary status, thus postponing the implementation of some relevant EU directives[17]. The special conditions guaranteed by the temporary status included 1) a prolonged deadline until 2016 for the renovation of the old power plants to meet the air quality standards of the EU, 2) a prolonged deadline until 2013 for the transition to an open electricity market and 3) financial support for research and development of best available technologies for energy and shale oil production.

[12] "Läbirääkimised Suncoriga jätkuvad peale probleemide lahendamist Austraalias". *Delfi,* 08.09.2000.
[13] "Eesti loobub Narva Elektrijaamade erastamise tehingust NRGga". *Postimees,* 08.01.2002.
[14] "Ühisavaldus seoses Narva Elektrijaamade erastamisega". *Postimees,* 27.06.2001.
[15] "Rohelised usuvad põlevkivienergeetika alternatiividesse". *Delfi,* 28.08.2001.
[16] "Tuumajaam tuleb Eestisse niikuinii". *Delfi,* 18.04.2002.
[17] "Eesti saavutas uue üleminekuperioodi keskkonnapeatükis". *Postimees,* 18.10.2002.

4.2.1.3. Consumers and suppliers

With regard to economic pressure, the Russian financial crisis in 1998 together with an abrupt drop in the world crude oil price presented serious economic challenges for the industry. The changed market conditions proved to be too difficult to overcome for Kiviter which had just been bought by the private enterprise Eriõli. The company went bankrupt in 1999 and was subsequently recreated as Viru Keemia Grupp[18]. There were also some early developments in the use of renewable energy. In 1997, the first industrial 150 kW wind turbine was mounted off the coast of Hiiumaa and there were ongoing negotiations over the establishment of a wind farm with investment from Danish and German companies[19]. There is also evidence of the emergence of a market niche for "green consumers" in 2000 as Eesti Energia, in cooperation with the Estonian Fund for Nature, started offering a "green energy" package for consumers who wished to choose energy produced from renewables only[20].

4.2.1.4. Industry strategies

In the middle of the 1990s, the oil shale industry was grappling with severe problems the causes of which can be traced back to the Soviet period. The technologies used for oil and energy extraction were developed way before the 1990s and some even dated back to as far the 1930s[21]. In addition to inflicting serious damage to the environment, they were also economically inefficient. The industry was in need of huge investments but the financial assets were nowhere to be found as the enterprises were in large debt. The situation gradually improved by the end of the 1990s when the Russian financial crisis was over and the oil price on the world market started rising again. After the bankrupt of Kiviter in 1999, the new-born VKG focused on research into the best available technologies for oil extraction. As the investment capacity of VKG slightly increased in the beginning of the 2000s, the focus of was mainly on diversification activities such as producing motor fuels from old car tires as well as developing new fine chemical products[22]. Meanwhile, the state-owned Eesti Energia had already drawn up a plan by 1997 for partially replacing the old production facilities at the Eesti and Balti power plants that used the heavily contaminating pulverized fuel combustion technology with the new circulating fluidized bed combustion technology[23]. The strategy was influenced by Estonia's unification negotiations with the EU: although the oil shale industry was awarded a temporary status, the environmental directives of the EU forced the industry to renovate the old production facilities by 2016. Technological change was

[18] Põhijooni põlevkiviõlitööstuse arengust Eestis
[19] "Tuul hakkab raha teenima". *Postimees,* 30.06.1998.
[20] "Eesti Energia alustab rohelise elektri müüki". *Postimees,* 14.12.2000.
[21] Energiamajanduse riiklik arengukava aastani 2020
[22] VKG Aastaraamat 2005
[23] "Uus tehnoloogia Eesti energeetikasse". *Delfi,* 13.01.1997.

also underway in Kunda Nordic Tsement as three of the old rotary kilns for cement production were renovated or replaced with new ones that enabled to limit the excessive dust emission and thus decrease air pollution[24].

Interestingly, the problem of climate change was never denied by industry representatives but by scientists like Endel Lippmaa and Anto Raukas. However, they were not in favour of oil shale as an energy source but instead supported the use of nuclear energy which was a popular opinion at the time[25]. There was some contestation to new environmental charges by the industry representatives but the arguments focused not on denying or downplaying the importance of environmental problems but on stressing the significance on social and political issues such as fears about the loss of energy security and independence and the looming problems of unemployment in Ida-Virumaa that would result from the economic constraints placed on the industry[26].

4.2.2. 2003–2009

Table 9. Overview of the main events (2003-2009).

External pressures			Industry
Activists and social movements	**Policymakers**	**Consumers and suppliers**	
1) nuclear energy debate grows; 2) Ministry of Economic Affairs and Ministry of Environment "awarded" for insufficient action against climate change; 3) the Green Energy Plan 2020 presented by the Estonian Fund for Nature; 4) the Estonian Green Party created; 5) climate change acknowledged as a serious global problem in public opinion	1) ecological tax reform implemented; 2) mining permits issued arbitrarily to new companies; 3) national development plans created for the energy sector and the utilization of oil shale; 4) Minister of Economic Affairs denies climate change and requests free carbon credits for the oil share industry from the EU; 5) renewable energy subsidies introduced; 6) raise in environmental tax rates less than initially planned	1) world crude oil price increases fourfold between 2001 and 2008; 2) Eesti Energia opens a website on energy efficiency and saving; 3) various small-scale local renewable energy projects developed; 4) renewable energy market niche expands to 25% of final consumption	1) the raising of environmental charges opposed by Eesti Energia and the Federation of Estonian Chemical Industries; 2) new environmental management systems implemented; 3) Enefit and Petroter technologies developed and new oil factories established; 4) sulphur treatment equipment installed; 5) diversification targeted at the production of motor fuels and fine chemical products; 6) Aulepa and Narva wind farms built and Iru power plant reconstructed; 7) principles of sustainable development incorporated into the identity of the companies

[24] "Ida-Viru tulevik ei ole viletsus". *Postimees,* 02.03.1998.
[25] "Kas toetate üleminekut tuumaenergiale?". *Delfi,* 27.11.1997.
[26] "Põlevkiviõlitootjaid kummitab pankrotioht". *Delfi,* 24.11.2000.

4.2.2.1. Activists and social movements

In the wake of Estonia's unification with the EU, concerns emerged about the long-term future of the oil shale industry due to the new environmental directives. Again, the debate was mainly between the proponents and opponents of nuclear energy, a possibility that was seriously considered until the early 2010s. At first, the idea was to co-operate with the Lithuanians in the construction of the new nuclear power plant in Ignalina. However, in 2008, the scientist Anto Raukas created the non-profit organization MTÜ Eesti Tuumajaam which acted as a lobby group for the establishment of a nuclear power plant in Estonia. The organization even drew up a detailed step-by-step action plan of the preparations for building a nuclear plant[27]. The plan included hiring several nuclear experts at the Tallinn University of Technology and opening a new Master's programme. The popular opinion at the time was that the only possible alternative to oil shale might be nuclear energy[28].

Environmental organizations like the Estonian Green Movement and the Estonian Fund for Nature were still opposed to nuclear energy. In 2006, a Green Energy Plan until 2020 was presented to the government by the Estonian Fund for Nature[29]. The plan proposed the transition to an energy system mostly based on renewable energy sources like wind and biofuels along with the decentralization of energy production. Another significant event was the establishment of the Estonian Green Party in 2006 by the climate activist Marek Strandberg[30]. In the 2007 election, the party went on to gain 6 seats in the parliament but was not included in the new government. However, the party developed into a strong advocacy organization for several environmental issues, including climate change.

Meanwhile, policymakers were expected to take serious action on climate change already following the ratification of the Kyoto protocol in 2002 and the subsequent adoption of the National Program on the Reduction of Greenhouse Gases in 2004 which foresaw the decrease in emissions by another 21% between 1999 and 2010[31]. The change of government in 2003 pleased environmental organizations because environmental policies were heavily featured in the new coalition agreement between Res Publica, the Reform Party and the People's Union of Estonia. However, the actions did not live up to the rhetoric and in 2004, the Ministry of Economic Affairs received an official

[27] "Tehnikaülikool valib tuumatöötajaid". *Postimees,* 29.04.2009.
[28] "Põlevkivi ainus alternatiiv oleks tuumaenergia". *Delfi,* 09.08.2006.
[29] "Rainer Nõlvak: Roheline Energiakava 2020". *Delfi,* 13.03.2006.
[30] "Asutati Erakond Eestimaa Rohelised". *Postimees,* 25.11.2006.
[31] Kasvuhoonegaaside heitkoguste vähendamise riiklik programm aastateks 2003–2012

"award" from the Estonian Green Movement for endangering the Earth's climate[32]. The public acknowledgement of climate change as a serious environmental issue increased in 2005 when an unprecedented storm hit the city of Pärnu on the west coast of Estonia. The storm killed one person, injured many others and tore down several buildings. At the time of the 14th meeting of the Conference of Parties in Poznan in 2008, the Estonian Green Party delivered another symbolic gesture by giving a small clock to the Estonian Minister of the Environment (figure 9)[33]. The clock was supposed to symbolize that the time for tackling climate change is running out and that a new international agreement for significantly reducing global greenhouse gas emissions must be reached soon. However, an agreement was not reached in that year nor in the following one despite high expectations for the 2009 meeting in Copenhagen. Despite that, public opinion had been changed as climate change was now considered as the second biggest global environmental issue by the Estonian people[34].

Figure 9. The Minister of Environment was presented with a symbolic clock by the Estonian Green Party[31].

4.2.2.2. Policymakers

In 2003, the idea about a possible ecological tax reform previously supported by environmental organizations was revived and plans were made under the leadership of the Minister of Environment Villu Reiljan to follow through on this idea. There were multiple reasons for this development, including the 1) forthcoming unification with the EU, 2) the governmental change after which the Ministry of Finance and the Ministry of Environment were governed by the same party as well as 3) the successful lobby of climate activists like Marek Strandberg from the Estonian Fund for Nature and Valdur Lahtvee from the Tallinn Department of the Stockholm Environment Institute[35]. The reform was to be based on the principle of "polluter pays" which means that the party responsible for producing pollution is made responsible also for paying for the damage done

[32] "Ministeerium sai rohelistelt kliimaohustaja auhinna". *Postimees,* 17.07.2004.
[33] "Rohelised kinkisid keskkonnaministrile kella". *Postimees,* 11.12.2008.
[34] Turu-uuringute AS (2010). *EESTI ELANIKE KESKKONNATEADLIKKUS: Eesti 15-74-aastase elanikkonna uuring.*
[35] Valdmaa, K. (2014). "Development of the environmental taxes and charges system in Estonia: international convergence mechanisms and local factors". *Policy Studies* 35, pp. 339-356

to the environment[36]. In addition, an annual rise of some environmental charges like pollution charges was foreseen by the reform (figure 10). In 2005, the comprehensive "Environmental charges law" was adopted that included all the previous taxes and charges in a unified framework[37]. The new law did not bring about any fundamental changes in the general system of the charges that had been in place from the early 1990s. However, the charge rates were increased significantly and fewer exceptions were allowed for the oil shale industry.

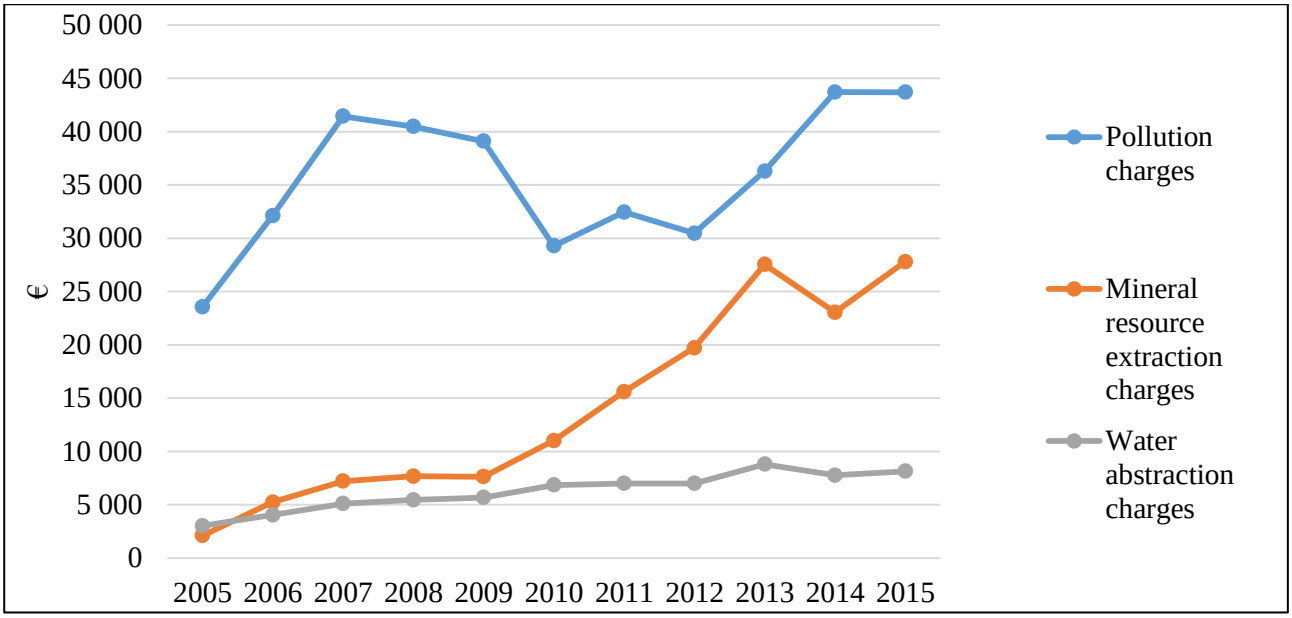

Figure 10. The collection of environmental taxes in Estonia from 2005 to 2015[38].

The rapid rise in oil prices beginning in 2003 led to a peculiar "gold rush". Oil shale companies started expanding existing mines as well as applying for permits for opening new mines[39]. Among them were several new private enterprises such as Merko Kaevandused which was granted a mining permit in 2003. As all of the potential mining sites are situated in Ida-Virumaa (figure 11), the "gold rush" sparked heavy opposition from environmental organizations as well as local people and municipal authorities who were concerned about the deterioration of living conditions in the local municipalities and the damage to the natural environment in and around the mining area. Demonstrations were held in front of the government building at Toompea hill and Merko Kaevandused was sued by the Estonian Fund for Nature[40]. After meeting with the local people and authorities, the government decided to stop issuing mining permits to companies until a national development plan for the utilization of oil shale had been created[41]. The process did not go

[36] "Villu Reiljan õhutab rohelist maksureformi". *Postimees*, 01.09.2004.
[37] Keskkonnatasude seadus
[38] Keskkonnaministeerium
[39] "Mitu erafirmat soovib põlevkivi kaevandada". *Delfi*, 16.06.2005.
[40] "Kaevanduste vastased murdsid Toompeale". *Postimees*, 20.09.2005.
[41] "Uute põlevkivikaevanduste rajamine jääb ajutiselt seisma". *Postimees*, 10.02.2006.

smoothly, however, as the Ministry of Environment was soon after accused of drawing up the plan behind closed doors and failing to involve the relevant interest groups in the discussion. The issue garnered much public attention as an open letter to the government was signed in 2006 by several cultural opinion leaders in the Theatre NO99 who argued for a rapid decrease in the extraction of oil shale resources in order to save the environment[42]. The situation was compared to the so-called Phosphorite War[43] in the late 1980s and a demand was made for a transition to a decentralized system based on renewable energy[44].

In 2008, a development plan was agreed upon which foresaw an annual limit of 20 mln tonnes for the extraction of oil shale[45]. The government saw this as a compromise because mining permits for over 23 mln tonnes had already been issued and altogether, permit requests had been made by companies for the extraction of up to 26 mln tonnes of oil shale annually[46]. However, the 20 mln tonnes limit was a significant increase when compared to the previous limit of 15 mln tonnes and the actual extraction capacities which were around 10 mln tonnes in the early 2000s (figure 12). In addition, measures and incentives aimed at the development of more efficient and environmentally friendly technologies that were initially included in the development plan had been removed from the document following contestation from the industry representatives[47].

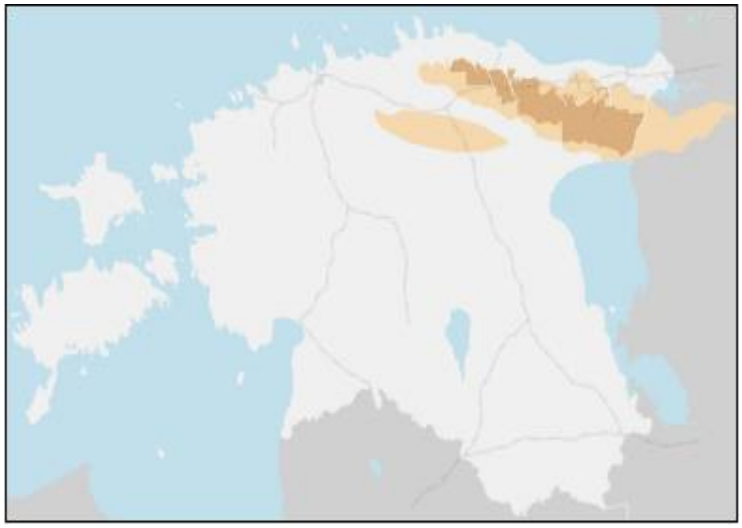

Figure 11. The actual (dark brown) and potential (light brown) oil shale resources in Estonia[48].

However, not all local authorities were against the new development plan. In 2007, Voldemar Trumm, the mayor of Kiviõli, expressed serious concerns about the fact that the mines of Kiviõli Keemiatööstus were running out of oil shale and that new mining permits had not been issued. He claimed that if the government fails to agree upon the new development plan, it will lead the whole

[42] "Pöördumine Eesti avalikkuse, Põhjamaade avalikkuse, EV valitsuse, riigikogu poole". *Postimees¸* 23.09.2006.
[43] The Phosphorite War (*fosforiidisõda*) was a citizen-led environmental protest movement in the Estonian Soviet Socialist Republic in 1987 and 1988 against the opening of large phosphorite mines in the Virumaa region.
[44] "Peeter Laurits: Ärge laastage Eestit Nauru kombel!". *Postimees,* 30.09.2006.
[45] Põlevkivi kasutamise riiklik arengukava 2008-2015
[46] "Põlevkivi võib kaevandada kuni 20 miljonit tonni aastas". *Postimees,* 21.10.2008
[47] "Roheliste arvates juhivad keskkonnaministrit põlevkivitöösturid". *Postimees,* 12.05.2008.
[48] Eesti põlevkivitööstuse aastaraamat 2014

city of Kiviõli into a "social catastrophe"[49]. The arguments of government officials were mainly led by concerns about energy security and independence. For example, the Minister of Environment Rein Randver said that oil shale is our "national wealth" and a guarantee of our energy independence[50]. Similarly, in a visit to the oil shale mines in Ida-Virumaa, president Toomas Hendrik Ilves said that oil shale is "a matter of our security and independence" and that miners are "the backbone of Ida-Virumaa"[51]. Interestingly, even the council of energy experts by the Estonian Academy of Sciences advised the government to raise the mining limit to more than 20 mln tonnes to cover the future energy needs of the country[52].

Meanwhile, work began on several documents that were to be united under the first comprehensive National Development Plan of the Energy Sector until 2020. These included the National Development Plan of the Electricity Sector until 2018, the Estonian Renewable Energy Action Plan until 2020, the Development Plan for the Utilization of Biomass and Bioenergy until 2013 and the Program on Energy Efficiency until 2013[53]. Several new measures were introduced with these plans for energy saving, the use of renewables, co-production of heat and power and more efficient utilization of oil shale. The development plans also prescribed the development of knowledge and legislation as a preparation for the potential establishment of a local nuclear power plant. However, rather moderate changes were foreseen with the development plans as the share of oil shale in energy production would drop to 70% and the share of renewables would rise to 8% by 2015[54].

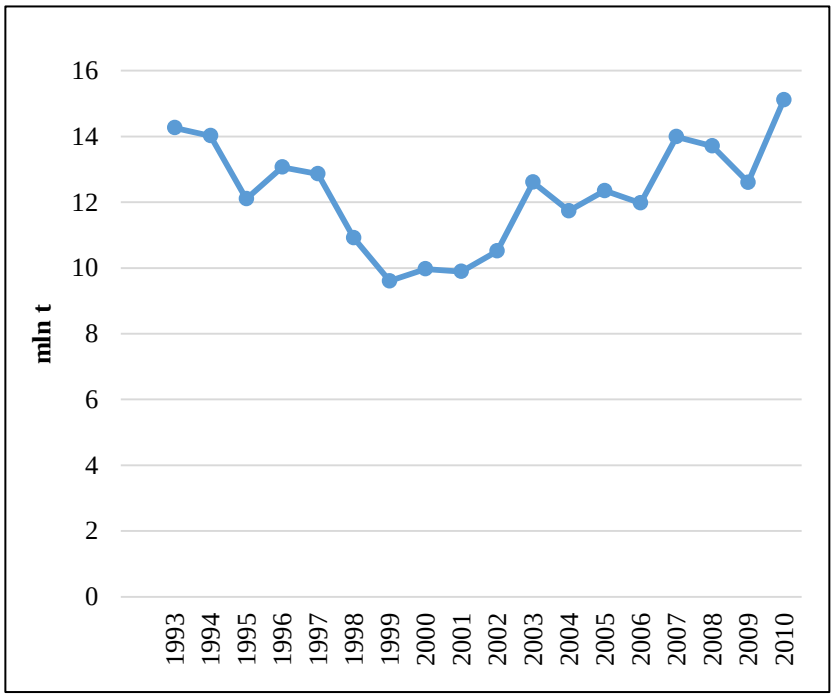

Figure 12. Oil shale extraction in Estonia from 1993 to 2010[55].

[49] "Kiviõli tehas võitleb riigi seatud takistustega". *Postimees*, 07.08.2007.
[50] "Rein Randver: Põlevkivi on rikkus, mida tuleb säästlikult kulutada". *Postimees*, 10.11.2006.
[51] "Ilves nimetas kaevureid Ida-Virumaa selgrooks". *Postimees*, 26.08.2007.
[52] „Akadeemikud suurendaksid põlevkivi kaevandamist". *Postimees*, 21.12.2006.
[53] Energiamajanduse riiklik arengukava aastani 2020
[54] Eesti elektrimajanduse arengukava aastani 2018; "Juhtkiri: Elekter muutuste lävel". *Postimees*, 28.12.2005; "Rohelised surusid riigile peale tuuleelektrienergia". *Postimees*, 28.12.2005.

A significant event occurred in 2008 as the Minister of Economic Affairs Juhan Parts participated in an EU meeting in Brussels to discuss the EU climate and energy framework. At the meeting, the aim of the Estonian government was again to negotiate special conditions and exceptions from the EU directives for the oil shale industry. The specific demands were that the oil shale industry should continue to get free carbon credits (emission allowances) under the emissions trading system[56]. The emissions trading system which started in 2005 had previously allowed Estonian oil shale companies raise a significant amount of extra funds by selling their surplus carbon credits. The surplus of carbon credits was due to the fact that the base year for the reduction of carbon emissions according to the protocol was the year 1990 when Estonia was still part of the Soviet Union and thus had enormously high carbon emission rates. In an interview before the meeting, Juhan Parts made some statements that demonstrated the attitude of the Estonian government towards climate change, the oil shale industry and the energy sector. Among the statements were that 1) "oil shale is a gift from the God", 2) "the CO_2 emissions of the oil shale industry have no impact on the melting of ice on the North Pole" and that 3) "no one can force us to give up oil shale [because] there are no alternatives and it is a matter of national security".

In 2009, the government collaborated with the Green Party to implement another rapid twofold increase in environmental charges as part of the ecological tax reform[57]. This plan was greeted with heavy opposition from the oil shale industry as they were grappling with the economic difficulties caused by the global financial crisis. The dispute resulted in the implementation of lower tax rates than the ones that were initially planned. For example, the pollution charges that were supposed to be increased threefold were only raised by 20%[58].

4.2.2.3. Consumers and suppliers

The main driver of economic growth for the oil shale industry was the world crude oil price which increased four times between 2001 and 2008. This led to a peculiar "gold rush" which included the expansion of mining areas as well as making plans for the building of new oil factories. The global financial crisis in 2009 subsequently led to an abrupt drop in the oil price which brought several development projects of the oil shale industry to a halt.

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[55] Statistikaamet. Maavarade kaevandamine maakonna järgi.
[56] "Parts sõdib Brüsselis põlevkivielektri eest". *Postimees,* 28.02.2008.
[57] "Ettevõtjad ägavad rohelise valitsuse maksukava all". *Postimees,* 12.06.2009.
[58] "Keskkonnatasud tõusevad väiksemas mahus". *Delfi,* 15.06.2009.

The overall share of renewable energy in final energy consumption increased from 16% in 2006 to over 25% in 2011. The developments in the renewable energy niche were mainly small-scale, including the establishment of new local combined heat and power stations, installing new solar panels and wind turbines and renovating hydropower stations. As a new development, attention was turned on energy efficiency as Eesti Energia opened a separate website for educating the public on the possibilities of energy saving in domestic households[59]. Perhaps the most significant event occurred in 2006 as the wind energy company Nelja Energia OÜ drew up an ambitious plan for building a wind farm off the coast of Hiiumaa that would have possibly been the biggest of its kind in the whole world[60]. The negotiations over the project are still ongoing as an agreement has not been reached between the company, the government and the local people.

The development of the renewable energy sector was also supported by the government as the implementation of the Renewable Energy Action Plan, the Development Plan for the Utilization of Biomass and Bioenergy and the Program on Energy Efficiency resulted in some new legislation. These included the introduction of renewable energy subsidies in 2007 that enabled ongoing projects to be finished and new projects to be planned[61]. Interestingly enough, Priit Enok, the advisor to the Ministrer of Economic Affairs, used exactly the same arguments in support of renewable energy that were used for the protection of the oil shale industry. His statements included that 1) renewable energy was more efficient, 2) created new jobs and 3) a decentralized energy system based on renewables would mean higher energy security[62].

4.2.2.4. Industry strategies

Estonia's unification with the EU called for the urgent need for developing and implementing new technologies and production facilities that would meet the heightened environmental standards. Fortunately for the oil shale industry, the rapid increase in the world crude oil price meant that big investments could be made starting from the early 2000s into environmental innovation as well as diversification activities and the expansion of production. As the first step, the adoption of new environmental management systems based on the ISO 14000 and ISO 14001 standards was started in 2002 in Eesti Energia and VKG[63]. In 2004, energy production started in the first new facilities with the circulating fluidized bed combustion technology at the Narva and Balti power plants of Eesti Energia. In 2009, the old energy blocks using the pulverized fuel combustion technology were installed with new sulphur treatment equipment that would reduce the sulphur emissions of the

[59] "Eesti Energia avas säästuportaali". *Postimees*, 01.09.2004.
[60] "Die Presse: Eestisse kavatsetakse ehitada maailma võimsaim tuulepark". *Postimees*, 24.04.2007.
[61] Taastuvenergia Aastaraamat 2013
[62] "Hüdroelekter tuleb jõgedest laelampi teosammul". *Postimees*, 06.11.2003.
[63] Eesti Energia Aastaaruanne 2004/05; VKG Aastaraamat 2005

facilities[64]. At the same time, investments were made not only into energy but also oil production. These included diversification activities such as research and development into the production of shale-oil-based motor fuels as well as into the new oil production technology Enefit in cooperation with the foreign-based Outotec Technology[65]. The new technology was based on the principle of the full utilization of oil shale in a comprehensive technological process, including the recycling and use of all the by-products such as the surplus heat, gas and spent shale. The building of a new oil factory based on the Enefit280 technology in Jõhvi started in 2009. There were also other R&D projects that were carried out with foreign partners. These included exploring the possibilities of building a new nuclear power plant in Lithuania together with the other Baltic States as well as the possible establishment of an oil-shale-based oil factory in Jordan[66].

Investments were also made at Eesti Energia into renewables. In 2003, the reconstruction of the Ahtme power station was started with the aim to produce heat from biofuels. In 2004, following financial support from the EU, plans were made for building a new 39MW wind park on the ash fields near Narva and in 2005, the Tulevikuenergia Sihtkapital fund was established for financing future R&D into alternative energy technologies[67]. In 2007, the building of the biggest wind farm of the Baltic states was started in Aulepa and preparations were made for the building of a new waste-to-energy unit at the Iru power station[68].

At VKG, the year 2005 marked the beginning of big investments into R&D. The investments were made mainly into new oil production technologies and facilities but significant efforts were also made for the utilization of the by-products of the oil production process such as the surplus gas for the production of heat and electricity[69]. The aim of the new Petroter technology was the full utilization of oil shale and its by-products similarly to the Enefit technology developed at Eesti Energia. The building of new oil factories based on the Petroter technology began in 2007 and the first of these was opened in 2009[70]. In 2006, the installation of new sulphur treatment equipment for the existing production facilities was set off and it was finished it 2008. With regard to diversification activities, the large-scale industrial production of fine chemical products began in 2006 and in 2008, plans were drawn up for the development of a cement production technology with the aim to establish a cement industry based on the by-products of the oil production process[71].

[64] Eesti Energia Aastaaruanne 2009/10
[65] EE Aastaaruanne 2006/2007
[66] EE Aastaaruanne 2005/2006
[67] EE Aastaaruanne 2004/2005
[68] EE Aastaaruanne 2007/2008
[69] VKG Aastaraamat 2006
[70] VKG Aastaraamat 2009
[71] VKG Aastaraamat 2008

As the global financial crisis hit in 2009, several plans for environmental innovation as well as the establishment of the cement factory were put on hold but the building for the new Petroter oil factory continued. However, in the same year, the Estonian government granted VKG a financial support for developing a new technology for the production of shale-oil-based motor fuels[72].

There were also signs of the changing identity of the companies. In 2008, climate change was first mentioned in the annual report of Eesti Energia. The report said that "the assurance in the supply of different energy sources and their impact on climate change are the main factors that will shape future investments".[73] In 2010, a whole chapter of the annual report was dedicated to climate change mitigation. The chapter included the acknowledgement that "when talking about the environmental impact of energetics, the topic of climate change mitigation cannot be avoided. According to current understanding, humans affect the Earth's climate by burning fossil fuels"[74]. However, the proposed solutions for reducing carbon emission were rather moderate, focusing on the implementation of the circulated fluidised bed combustion technologies and the partial use of biomass in the oil shale energy units[75]. The development of renewable energy technologies was mentioned vaguely. In 2009, in addition to the annual yearbook, VKG issued its first "Annual Report on Social Responsibility and Sustainable Development". Although climate change was not mentioned in the document, the company emphasised the importance of environmental protection and the development of the local area[76]. Eesti Energia started issuing a similar report in 2012. The change of CEOs at Eesti Energia in 2014 also brought along a change in the mission of the company. However, no mention to alternative energy sources was made in the new mission of the national energy company which stated that "Eesti Energia is the world leader in oil shale energy"[77].

In 2009, the government collaborated with the Green Party to implement another rapid twofold increase in environmental charges as part of the ecological tax reform[78]. This plan was greeted with heavy opposition from the oil shale industry as they were grappling with the economic difficulties caused by the global financial crisis. Sandor Liive, the CEO of Eesti Energia, claimed that "if oil shale provides us with energy security, then it would be unwise to place high taxes on the oil shale industry"[79]. Instead, he argued for a tax reform that would make the charging of taxes from the oil shale industry depend on the world crude oil price. The contestation to the new policies also

[72] VKG Aastaraamat 2009
[73] Eesti Energia Aastaaruanne 2007/2008
[74] Eesti Energia Aastaaruanne 2009/2010
[75] Eesti Energia Aastaaruanne 2010
[76] VKG Sotsiaalse vastutuse ning säästva arengu aruanne 2008-2009
[77] Eesti Energia Aastaaruanne 2014
[78] "Ettevõtjad ägavad rohelise valitsuse maksukava all". *Postimees,* 12.06.2009.
[79] "Liive soovitab valitsusele naftamaksu". *Postimees,* 12.06.2009.

involved the Federation of Estonian Chemical Industries (FECI) the criticism of which focused on the loss of up to 4000 jobs in the industry[80]. The action of the federation can be viewed as a manifestation of a closed industry front. The dispute resulted in the implementation of lower tax rates than the ones that were initially planned. For example, the pollution charges that were supposed to be increased threefold were only raised by 20%[81].

4.2.3. 2010–2013

Table 10. Overview of the main events (2010-2013).

External pressures			Industry
Activists and social movements	**Policymakers**	**Consumers and suppliers**	
1) Minister of Economic Affairs Juhan Parts "awarded" for supporting environmentally harmful behaviour in 2010 and 2011; 2) the newly-created Estonian Renewable Energy Council presents the Renewable Energy 100% plan; 3) the nuclear energy debate fades	1) free carbon credits and other exceptions for the oil shale industry requested from the EU; 2) new Auvere power plant established; 3) oil shale mining limit not reduced in the new development plan; 4) objectives of the previous development plan for oil shale utilization left unattained	1) world crude oil price increases rapidly again in 2010 and 2011; 2) new wind farms built in Paldiski and Pakri; 3) several other developments in the renewable energy sector put on hold because of legislative confusion	1) new Auvere power plant established; 2) four new oil factories opened; 3) first new mine in 40 years opened in Ojamaa; 4) new wind farms built in Narva, Paldiski and Pakri; 5) new power plants based on biofuels or waste opened in Paide and Iru

4.2.3.1. Activists and social movements

Public attention to climate change decreased somewhat after the failure of the 15th Conference of Parties in Copenhagen in 2009. However, environmental concerns related to the oil shale industry were still of high importance to environmental organizations. In 2010 as well as 2011, the Minister of Economic Affairs Juhan Parts was presented with a symbolic axe as an annual "award" for the most environmentally harmful deed. The axe was given to him by the Estonian Council of Environmental NGOs for systematically supporting the use of oil shale in favour of alternative energy sources. Upon receiving the award, Parts said that oil shale "is our gift, not our curse" and "it means energy security and […] that we will always have access to affordable electricity but also

[80] "Liit: keskkonnatasude tõus viib töö 4000 inimeselt". *Delfi,* 15.06.2009.
[81] "Keskkonnatasud tõusevad väiksemas mahus". *Delfi,* 15.06.2009.

jobs and possibilities for the export of technology"[82]. The year 2011 saw the creation of a new NGO, the Estonian Renewable Energy Council led by the young energy expert Rene Tammist. The new organization united some of the most important renewable energy entrepreneurs and associations and quickly assumed the role of an efficient advocacy group. In 2012, they came forward with a new plan called Renewable Energy 100%[83]. The plan proposed a transition to an energy system based on renewables only and included detailed analysis and steps for the transition to be implemented by 2030. The proposals were greeted by the chairman of the Estonian Green Party Aleksander Laane who said that "everything is ready for a renewable energy transition"[84].

At the same time, the dispute continued over the pros and cons of nuclear energy. Interestingly, the most active proponents of nuclear energy all had a scientific background but also shared skepticism towards climate change. In addition to the long-time supporters of nuclear energy Anto Raukas and Endel Lippmaa[85], a fellow scientist Mihkel Veiderma of the Estonian Academy of Science claimed that "the impact of human activity on climate change is still a matter of dispute" and that "a large-scale substitution of fossil fuels with renewables is not realistic"[86]. He also believed oil shale to be "a guarantee of energy security" and that the only viable option besides oil shale would be nuclear energy. However, the debate changed and eventually died after the 2011 nuclear disaster at Fukushima[87].

The topic of energy security was one of the most discussed issues in this period (see also sections 4.2.3.2 and 4.2.3.4) and there was confusion over the multiple meanings of the term. In 2012, the leader of the Social Democratic Party Sven Mikser published an article in which he differentiated between at least three different meanings of the notion. He claimed that "energy security" can mean 1) that the consumer can be certain to always have access to energy, 2) that there is enough supply of affordable energy on the market and 3) that the organization of the energy system is environmentally sustainable and meets the public interests[88]. He also added that the building of new oil shale based power plants "does not increase our energy security in any way".

[82] "Parts: loodetavasti aitab keskkonnakirves mul väärarusaamu harvendada". *Postimees,* 06.01.2011.
[83] "FOTOD: Taastuvenergia Koda: taastuvenergiale üleminek on majanduslikult kõige otstarbekam". *Postimees,* 22.08.2012.
[84] "Aleksander Laane: Taastuvenergeetiliseks pöördeks on kõik valmis". *Delfi,* 29.08.2012.
[85] "Akadeemikud: nüüdistuumajaamad on ohutud". *Postimees,* 21.03.2011.
[86] "Mihkel Veiderma: energia maailmas, Euroopas ja Eestis". *Postimees,* 19.07.2011.
[87] Bostelmann, A. (2012). *Public opinion-building in mass media: a media analysis of Estonia's nuclear energy debate in 2011.*
[88] "Sven Mikser: Elektrist, turvalisusest ja seaduslikkusest". *Delfi,* 17.10.2012.

4.2.3.2. Policymakers

In the beginning of the 2010s, the Minister of Economic Affairs Juhan Parts was under fire for several decisions that had been made concerning the state-owned Eesti Energia. The criticism focused on state support for massive investments into oil shale development projects such as the renovation of old energy blocks at Eesti and Balti power stations and the building of new blocks as well as a new oil factory. At the same time, legislation was being drawn up in the Ministry for limiting renewable energy subsidies which resulted in the construction of new wind farms being put on hold[89]. In 2012, the leaders of several environmental organizations signed an open letter to Parts in which they expressed concerns over the growing environmental impact of the oil shale industry and accused the Minister of working against the EU energy and climate policy by subsidizing the use of oil shale[90]. They were joined in their criticism by the Minister of Environment Keit Pentus who did not approve of cutting renewable energy subsidies[91].

Despite heavy criticism, the government moved on with the plans of building a new power plant for Eesti Energia in the village of Auvere. The new 300 MW power plant which cost 638 mln € represented the all-time biggest investment in the Estonian economy. It was based on the circulating fluidized bed combustion technology that was also used in the renovated energy blocks at the Eesti and Balti power plants and allowed for the utilization of up to 50% of biomass in energy production[92]. The building of the Auvere power station began in 2012 and was partly financed by free carbon credits again requested from the EU that absolved the oil shale industry from the obligation of paying carbon emission charges[93]. The decision was seen to go against the government's official strategy laid out in national development plans as well as the strategy of Eesti Energia. The official strategy aimed at a more efficient use of oil shale which meant focusing on oil instead of energy. Interestingly, in a comment in 2014 immediately before leaving office, the CEO of Eesti Energia Sandor Liive said that the construction of the Auvere power plant "was a political decision with the goal of increasing energy security but economically it was not a reasonable solution"[94]. This statement was in line with the words of Juhan Parts who said that the argument of energy security was "absolutely important" in making the decision[95]. The decision was opposed among others by the National Audit Office and the Social Democratic Party who compared the decision to "playing Russian roulette", pointing out that it was based on inadequate economic

[89] "Valitsus külmutas uute tuuleparkide rajamise". *Postimees,* 27.10.2012.
[90] "Avalik kiri Juhan Partsile põlevkivienergeetika subsideerimisest". *Delfi,* 13.02.2012.
[91] "Keit Pentus kritiseerib Partsi eelnõu: see põlistab saastava põlevkivielektri tootmist". *Delfi,* 15.02.2012.
[92] "Uus elektrijaam kerkib kullaauguna näiva õlitehase kõrvale". *Postimees,* 05.05.2012.
[93] "Euroopa Komisjon kinkis Eesti Energiale õiguse üle 300 miljoni euro eest saastada". *Delfi,* 27.06.2012.
[94] "Liive: Auvere elektrijaam ei ole äriliselt mõistlik". *BNS,* 27.10.2014.
[95] "Parts põlevkivijaamade ehitamisest: meil on uusi jaamu vaja, praegused on 50 aastat vanad". *Delfi,* 17.10.2012.

calculations and did not take into consideration the changing economic conditions resulting from the opening of the electricity market in 2013[96]. They also claimed that the argument of energy security amounts to nothing more than raising unaccounted fear towards Russia and that real energy security lies in good overseas connections and a decentralized energy system[97]. In 2014, however, the economic aspects proved to be decisive as Eesti Energia decided against the construction of a second 300 MW power plant that was also initially planned in Auvere.[98]

In 2013, preparations started for a new national development plan for the utilization of oil shale. While the previous development plan foresaw a new mining limit of 15 mln tonnes by the year 2015, the idea was dropped from the new plan and representatives of the industry as well as the Minister of Economic Affairs Juhan Parts even argued for raising the limits to more than 20 mln tonnes[99]. On the other hand, the Minister of Environment Keit Pentus did not approve of this and the annual limit remained at 20 mln tonnes in the new development plan[100].

While the government was busy with drawing up the new plan, the National Audit Office published an extremely critical report concerning the implementation of the previous national development plan. The report stated that all of the objectives of the previous development plan, including 1) guaranteeing energy security, 2) using oil shale resources more efficiently and 3) reducing the environmental impact of the industry were either inadequate in the changed market conditions or had not been attained by the respective deadlines[101]. In addition, the report said that 1) not enough research has been done into the environmental and social impacts of oil shale usage and that the current system of environmental charges and incentives does not motivate the oil shale industry to reduce environmental damage. A proposal was made for changing the system of charges in order to increase environmental protection and raise funds to the state's budget[102]. The ideas were acted upon following the change of government in 2014.

At the same time in 2013, the Estonian government representatives in Brussels again tried to negotiate exceptions from the EU for the oil shale industry. This time the matter was the Fuel Quality Directive which foresaw taxing of fuel production based on carbon emissions and would

[96] "Urve Palo: majandusminister on otsustanud põlevkivielektriga Vene ruletti mängida". *Delfi,* 28.10.2012.
[97] "Sven Mikser: Elektrist, turvalisusest ja seaduslikkusest". *Delfi,* 17.10.2012.
[98] Eesti Energia Aastaaruanne 2014
[99] "Valitsus algatas põlevkivi arengukava koostamise". *Postimees,* 04.04.2013; „Juhan Parts: kaaluda võiks põlevkivi kaevandamismahu suurendamist". *Delfi,* 10.06.2013.
[100] "Keskkonnaminister ei näe vajadust põlevkivi kaevemäära vähendamiseks". *Postimees,* 29.07.2014.
[101] "Riigikontroll: põlevkivi arengukava eesmärgid on täitmata". *Postimees,* 20.03.2014.
[102] "Riigikontroll: Eesti võiks kaaluda põlevkivi kasutamise suuremat maksustamist". *Delfi,* 05.11.2013.

have meant unfavourable conditions for shale-oil-based motor fuels[103]. However, 2013 was also the year when the industrial emissions law was adopted in the Estonian legislation. The law was based on the EU's Industrial Emissions Directive agreed upon in 2010 and shifted the focus of investments into environmental innovation from the so-called end-of-pipe technologies towards cleaner production based on best available technologies (BAT)[104].

4.2.3.3. Consumers and suppliers

After the shock of 2009, the word crude oil price increased rapidly again in 2010 and 2011. In the renewable energy sector, there was much confusion as the government could not agree on new legislation for renewables. Because of this, several development projects were put on hold[105]. This was also evidenced in the share of renewable energy in final energy consumption which rose by almost 10% between 2006 and 2011 but has not increased since then.

There was positive news though as it was announced that Estonia had been the first country to meet the EU's objective of 25% share of renewables in final energy consumption. The objective was reached way before the deadline in 2020. In addition, in 2013 Nelja Energia OÜ opened a new 40 MW wind farm in Paldiski and a 6,9 MW wind farm in Ojaküla. Perhaps the biggest expansion in the renewable energy sector occured in the installation of solar panels which were mainly used by microproducers, e.g. domestic households.

4.2.3.4. Industry strategies

For Eesti Energia, the most important decision was of course the establishment of the Auvere power plant. In addition to this, the year 2012 saw the opening of the new oil factory based on the Enefit Technology[106]. In the same year, a public procurement was announced for the building of the first shale oil factory in Jordan and a building permit for the factory was granted in the following year. In 2014, the construction of the factory started in Jordan while plans for the building of a second power plant in Auvere were cancelled[107]. This decision was in line with the company's strategy which focused on oil instead of energy production. As for investments into environmental innovation, in 2013 new nitrogen capture systems were installed on production facilities and the installation of sulphur treatment equipment also continued[108]. With regard to renewable energy, the construction of the 39 MW Narva wind farm began in 2011 and new wind farms were also planned

[103] "Valitsuse välklobilahing Brüsselis: päästa Eesti põlevkivitööstus". *Delfi*, 23.05.2013; "Eesti õlitööstused võitsid hääletuse Euroopa parlamendis". *Postimees*, 17.12.2014.
[104] Tööstusheite seadus
[105] Taastuvenergia Aastaraamat 2013
[106] Eesti Energia Aastaaruanne 2012
[107] Eesti Energia Aastaaruanne 2014
[108] Eesti Energia Aastaaruanne 2013

in Paldiski and Pakri in cooperation with Nelja Energia OÜ. The developments were not limited to wind energy as in 2013, the construction of the first 77 MW waste-to-energy unit at the Iru power plant was finished and work was also underway for building a combined heat and power plant in Paide. In 2010, a heated discussion emerged over the decision by Eesti Energia to use woodchips for energy production in the renovated energy blocks at Balti and Eesti power plants which enabled up to 50% use of biofuels. While Eesti Energia tried to frame the decision as a step for the environment, energy experts from different backgrounds including Rene Tammist from the Renewable Energy Council claimed that "not every use of renewables is environmentally friendly" and that burning woodchips for energy production is also an extremely inefficient choice[109]. The use of woodchips was stopped in 2012 after ongoing confusion over the legislation concerning the use of renewables[110].

At VKG, several projects for reducing the environmental impact were finished in 2010 and 2011. Among these was the reconstruction of the oil container park which included the installation of systems for the capture of greenhouse gases as well as the closing of landfills[111]. The carbon and sulphur emission rates of the company increased in 2010 though as a result of the opening of the new Petroter oil factory. However, lots of R&D was being done for the full utilization of oil shale and the recycling of the by-products and residues. In 2013, a new lime factory was established which used several by-products of the industry as an input in the lime production process[112]. The lime was used in turn in the sulphur treatment equipment. In addition, the residues of the mining process were used in road construction and comprehensive research was carried out into the possibilities of the utilization of spent shale and residual gas as well as the production of "green" fuels from biomass.

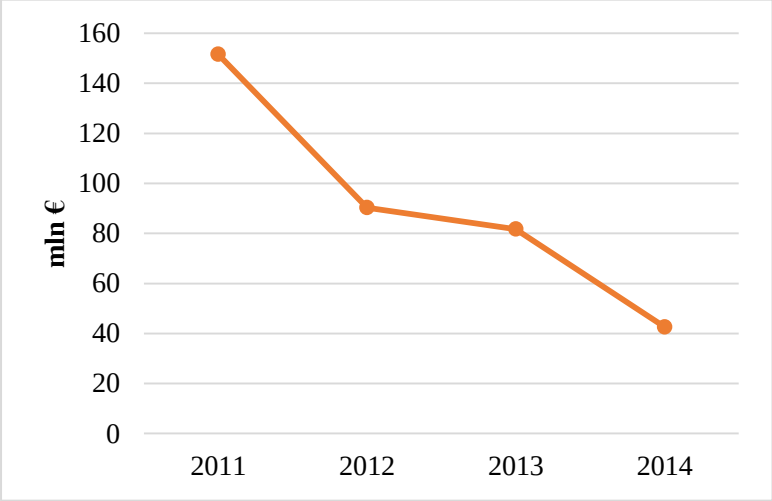

Figure 13. Investments into environment by the oil shale industry from 2011 to 2014[113].

[109] „Hakkpuidu põletamine Narvas ei ole raiskamine ega amoraalne rohepesu". *Postimees*, 07.07.2011; „Rene Tammist: Puiduga on targematki teha kui Eesti Energia kateldes põletada". *Delfi*, 13.07.2011.
[110] „Eesti Energia: pole toetust, pole taastuvenergiat". *Postimees*, 15.08.2012.
[111] VKG Aastaraamat 2010; VKG sotsiaalse vastutuse ning säästva arengu aruanne 2010; VKG Aastaraamat 2011; VKG sotsiaalse vastutuse ning säästva arengu aruanne 2011
[112] VKG Aastaraamat 2014
[113] Eesti põlevkivitööstuse aastaraamat 2014

Direct investments into environmental innovation decreased significantly in early 2010s as most of the projects started since 2005 had been finished by now (figure 13). However, significant investments were made into new production facilities due to favourable market conditions. The building of the second Petroter oil factory started in 2012 and the third one in 2013. Another remarkable event was the opening of the Ojamaa mine in 2013 which was the first new oil shale mine opened in Estonia in the last 40 years[114].

Similar developments were underway at Kunda Nordic Tsement which saw a twofold increase in the use waste and biofuels in the production facilities. The co-processing of waste in the kilns enabled to rely less on fossil fuels and reduce the negative environmental impact of the cement production process. A decrease in carbon emissions was achieved by the implementation of a new dry clinker burning process and efforts were also made for the recycling of ash and dust resulting from the clinker burning[115]. Things were not going so well at Kiviõli Keemiatööstus though. In 2010, an official appeal signed by almost 700 people from the local area was sent to several EU institutions as well as international environmental organizations with the aim to stop the severe air pollution caused by the factories at Kiviõli[116]. Despite the appeal, the company continued the contamination[117]. In addition, another argument emerged with the local people when it turned out that the company was extracting oil shale from its mines despite a forbidding court order[118]. Some initiative was finally shown in 2011 when the decision was made for the construction of a new oil container park[119]. After the company was acquired by the businessman Heiti Hääl in 2014, new funds were gained for investments into environment as well as the expansion of oil production[120].

4.2.4. 2014–…

Table 11. Overview of the main events (2014-…).

External pressures			Industry
Activists and social movements	**Policymakers**	**Consumers and suppliers**	
1) the impact of climate change heavily covered in the media; 2) first-ever	1) extra mining permits granted for the oil shale industry; 2) new national development plan for the	1) world crude oil price drops over two times between 2014 and 2016	1) additional sulphur and nitrogen capture systems installed on existing power plants; 2) a campaign against

[114] „FOTOD: President Ilves Ojamaa kaevanduse avamisel: tark oleks õppida põlevkivi paremini väärtustama“. *Delfi,* 31.01.2013.
[115] Tsemendiwabrik 2012; Tsemendiwabrik 2013; Tsemendiwabrik 2014
[116] „Kiviõli elanikud esitasid kaebuse Euroopa Komisjonile“. *Postimees,* 06.04.2010.
[117] „Portaal: Kiviõli Keemiatööstus jätkab linna õhu saastamist“. *Postimees,* 30.07.2010.
[118] „Maaomanikud: Kiviõli Keemiatööstus jätkab kaevandamist vaatamata kohtu keelule“. *Delfi,* 24.03.2011.
[119] „Kiviõli Keemiatööstus asus end parandama“. *Postimees,* 17.09.2011.
[120] „Kiviõli Keemiatööstuse õlitootmine võib mitu korda kasvada“. *Postimees,* 12.01.2012.

demonstration held for action against climate change in Tallinn; 3) "game over" predicted for the oil shale industry after the Paris agreement; 4) Federation of Estonian Chemical Industries and the Estonian government "awarded" for supporting environmentally harmful behaviour in 2015 and 2016	utilization of oil shale adopted at the time of COP21 that foresaw an annual mining capacity of 20 mln tonnes for the next 15 years and investments of 5,7 mln € into the oil shale industry; 3) new national development plan for the energy economy adopted; 4) "The Basis of Climate Policy until 2050" adopted; 5) raise in environmental tax rates less than initially planned; 6) tax rates subsequently reduced to the level of 2009 on a temporal basis		increasing environmental charges launched by the Federation of Estonian Chemical Industries; 3) VKG temporarily stops the work of two old Kiviter oil factories and laid off 300 employees 4) VKG re-hires laid off employees after extra mining permits are issued by the government; 5) VKG, Eesti Energia and Kunda Nordic Tsement lay off around 750 employees again; 6) VKG re-hires laid off employees again following tax reductions from the government

4.2.4.1. Activists and social movements

By the start of 2015, climate change had again gained top priority among the issues concerning the oil shale industry because of several national and global developments. On the national scale, the campaign "Our welfare lies in our national resources!" (see section 4.2.4.4) angered many environmental activists. As a result, the Council of Environmental NGOs gave the annual "award" for the most environmentally harmful deed to the Federation of Estonian Chemical Industries[121]. Elsewhere, preparations were being made for the 21st Conference of the Parties in Paris. Because of this, climate change featured heavily in the media throughout the year and the daily newspaper Eesti Päevaleht featured a series of articles on the impact of climate change[122]. Among the people who turned public attention to climate change were activists Kaarel Tarand and Marek Stranderg, Raul Potisepp and Rene Tammist from the Renewable Energy Council and even Tarmo Soomere, the president of the Estonian Academy of Sciences. The prevailing opinion was that the success of the Paris meeting would mean that "the game is over" for the oil shale industry[123]. In addition, a public demonstration that demanded action against climate change was held for the first time in Estonia in November 2015 in Tallinn (figure 14)[124]. The event was organized by the Estonian Fund for Nature,

[121] „Keskkonnateoks valiti kaitsealade moodustamine, keskkonnakirve pälvis Eesti Keemiatööstuse Liit". *Delfi*, 15.01.2015.
[122] „Kas märkame muutuvat ilma alles siis, kui maailmas rändab 150 miljonit kliimapõgenikku?". *Delfi*, 07.10.2015
[123] "Kaarel Tarand: põlevkivilõke kustub niikuinii". *Postimees*, 05.12.2015; „Rene Tammist: põlevkivisektori *game over*". *Delfi*, 06.12.2015
[124] „Tallinnas nõudsid meeleavaldajad kliimamuutuste peatamist". *Postimees*, 29.11.2015.

the Estonian Green Movement and Tallinn University. Speeches were made by the former Prime Minister and climate scientist Andres Tarand and Silvia Lotman from the Estonian Fund for Nature.

Figure 14. A demonstration for the fight against climate change in Tallinn before COP21 in 2015[115].

Energy security continued to be an important issue. In 2014 and again in 2015, the Renewable Energy Council and the Estonian Green Movement organized a campaign called "Energy security? – Yes! With renewable energy we will be independent!"[125] the aim of which was to renegotiate the meaning of the term "energy security" (figure 15). The organizers of the campaign stressed that importing fossil fuels is extremely expensive for EU countries and it supports the flourishing of undemocratic regimes.

In 2016, a completely new problem was raised in relation to the oil shale industry as the Estonian Green Party started a petition for which signatures from over 1200 people were collected. The aim of the petition was to preserve the natural habitats of the flying squirrel, a rare and endangered species in Estonia[126]. The problem became evident after VKG and Kiviõli Keemiatööstus had put in requests for mining permits around Sonda which was also the place where the flying squirrels lived. The oil shale companies issued a response to the petition in which they stated that preserving the natural habitats of the flying squirrel would mean a loss of 112 mln € in tax revenue for the state budget[127].

[125] Energiajulgeolek? – Jah! Taastuvenergiaga oleme sõltumatud!
[126] „Lendorava kaitset nõudvale märgukirjale on antud üle 1200 allkirja". *Postimees*, 12.04.2016.
[127] „Energiafirmad: lendorava elupaigad toovad riigile 112,2 miljonit kahju". *Postimees*, 18.05.2015.

Figure 15. A poster from the campaign "Energy security? – Yes! With renewable energy we will be independent!"[116].

4.2.4.2. Policymakers

After the critical report by National Audit Office, in 2014 the government started planning an annual rise of environmental charges by 20%. This rate was proposed in an analysis by the Tallinn Department of the Stockholm Environment Institute. The plan was supported by the chairman of the Renewable Energy Council Rene Tammist who stated that taxpayers must be fully compensated for the use of national resources as well as the damage inflicted on the environment[128] and by the Council of Environmental NGOs which claimed that the raising of environmental charges in unavoidable[129]. The plan was met by an unprecedented wave of contestation from the oil shale industry led by the Federation of Estonian Chemical Industries which launched a massive campaign called "Our welfare lies in our natural resources!"[130] (see section 4.2.4.4). At the end of 2014, the Ministry of Environment surrendered to the lobby of the Federation of Estonian Chemical Industries as the new legislation prescribed an annual rise in tax rates by 3-6% for the next ten years instead of the initially planned 20%[131]. However, this was not enough for the oil shale industry as it was simultaneously grappling with problems caused by the falling world crude oil price. In November and December 2014, several hundred people in Kohtla-Järve became unemployed as VKG temporarily closed the old oil factories that used the economically inefficient Kiviter technology[132].

[128] „Taastuvenergia Koda: kas põlevkivi sektori kõrgem maksustamine on põhjendatud?". *Delfi,* 21.07.2014.
[129] „Keskkonnaühendused: põlevkivitööstuse keskkonnatasude tõstmine on vältimatu". *Postimees,* 26.08.2014.
[130] Meie õnn on meie maavarad!
[131] „Keskkonnatasud tõusevad 3-6 protsenti aastas". *Postimees,* 27.10.2014.
[132] „VKG koondab mitusada inimest, ministrid „arutavad põlevkivitööstuse probleeme"". *Delfi,* 06.01.2015.

At the same time, the Estonian Prime Minister Taavi Rõivas participated in the opening ceremony of the new Petroter oil factory during which he said that the establishment of new oil factories is an extremely important step towards energy security and independence[133]. The opinion was shared by the CEO of Eesti Energia Sandor Liive who stated that "Estonia is a country of energy security"[134]. A few weeks later, another statement on oil shale was made by Taavi Rõivas. After a meeting in Brussels during which an agreement was reached on the new EU climate and energy policy framework, he stated that the decisions of the European Council "gave assurance for the further development of the oil shale sector [in order to] ensure energy security"[135]. A different point of view was presented again by the National Audit Office who published a report in which they claimed that there is a need for a comprehensive economic reform in the Ida-Virumaa region and that the development of new industries must be supported to replace the eventual loss of jobs in the oil shale sector[136].

The loss of jobs due to the closing of the two VKG factories at the end of 2014 caused panic in the government. In January 2015, a plan was made immediately for a tax reform proposed by the industry that would make the oil shale extraction charges depend on the world crude oil price[137]. At the same time, the Minister of Environment Mati Raidma said that the only solution to the problems of VKG is to raise the mining limits. The logic behind this proposal was that this way the company could extract more resources from its own mine instead of buying it from the mines of Eesti Energia. In June 2015, the government implemented an interesting change in legislation that allowed the oil shale industry to use up all of the mining capacities that had been previously left unused from the limit of 20 mln tonnes since 2009[138]. This meant that, for example, if the industry extracted only 15 mln tonnes of oil shale in 2010, it could now use up the 5 mln tonnes that was left unused that year. The chairman of the Estonian Green Party Aleksander Laane called this decision "a crime against the ecosystem"[139]. The decision was also opposed by the Council of Environmental NGOs who said that the mining capacities should be decisively reduced instead[140].

As the world crude oil price continued to drop in 2016, the government came up with another plan to save the oil shale industry. The idea of using wood chips for energy in the renovated blocks of Eesti Energia was revived and it sparked a heated argument again between environmental activists,

[133] „Rõivas: Eesti liigub kindlalt energiasõltumatuse poole". *Postimees,* 7.10.2014.
[134] „Sandor Liive: Eesti on energiajulgeoleku riik". *Delfi*, 27.05.2014.
[135] „Rõivas: ülemkogu otsus on oluline Eesti energiajulgeolekule". *Postimees*, 24.10.2014.
[136] „Riigikontroll: Ida-Virumaa vajab põlevkivitööstuse asemele uusi töökohti". *Postimees*, 3.10.2014.
[137] „Riik kavatseb VKG koondamiste tõttu kiiresti ressursitasude süsteemi muuta". *Postimees,* 08.01.2015.
[138] „Valitsus toetas põlevkivi tagantjärgi kaevandamist". *Postimees*, 04.06.2015.
[139] „Aleksander Laane: riigikogu kavandab kuritegu ökosüsteemi vastu". *Postimees*, 08.06.2015.
[140] „Keskkonnaühendused: kasvatamise asemel tuleb põlevkivi kaevemahte otsustavalt vähendada". *Delfi*, 02.02.2015.

the government and the industry[141]. Hando Sutter, the new CEO of Eesti Energia claimed that the use of wood in power plants instead of oil shale has a positive impact on the environment and there is an abundance of old low-quality wood in Estonia that is suitable for these purposes[142]. On the other hand, Silvia Lotman from the Estonian Fund for Nature argued that this statement is not correct and that the massive burning of wood in power plants is not environmental protection[143].

While the government was planning several concessions for the oil shale industry, calls were being made by activists for the radical reform of Estonia's energy system and the oil shale sector because of the oncoming 21st Conference of the Parties in Paris. The necessity of new and decisive steps was also acknowledged by the government and in 2014 work began in the Ministry of Environment over a new strategy called "The Basis of Climate Policy until 2050". The document was supposed to be not a sectoral development plan but one of the fundamental strategic documents of the state along with the sustainable development strategy and the international competitiveness strategy[144]. This was also the first time that the state had come up with a comprehensive strategy specifically focused on climate change mitigation and adaptation. Before that, the state had not implemented specific climate policies as these had been part of other environmental laws. The main objective declared in the new strategy was an 80% reduction in greenhouse gas emission rates by 2050 compared to 1990. Concerning the oil shale sector, the strategy foresaw raising the efficiency of the industry which meant focusing on oil production and stopping electricity production from oil shale by 2030. The 80% reduction in greenhouse gas emissions was to be achieved by exporting oil which also meant exporting the emissions resulting from the use of shale oil to the importing countries. This strategy sparked criticism from environmental activists and even from the Government Office of Estonia which stated that "climate change is a global problem and therefore attention should be paid to emissions resulting from the products made in Estonia regardless of whether these products are consumed here or exported"[145]. At the same time, a new National Development Plan for the Energy Economy until 2030 was drawn up in the Ministry of Economic Affairs which set a goal of a 50% share of renewables in domestic electricity consumption by 2030[146]. The new plan was described as "moderate", "unambitious" and "visionless" by energy experts[147].

Interestingly, in December 2015 in the very same week as the historic Paris agreement was reached, the Estonian parliament was discussing a new version of the national development plan for the

[141] „Valitsus tahab taas lubada puidu massilist katlasse kühveldamist". *Postimees,* 15.01.2016.
[142] "Hando Sutter: puidu põletamisest Narva elektrijaamades – mida siis ikkagi otsustati?". *Postimees,* 26.01.2016.
[143] "Eestimaa Looduse Fond: neli väärväidet metsadest elektri tootmise teemal". *Postimees,* 27.01.2016.
[144] Kliimapoliitika põhialused aastani 2050
[145] "Eesti kliimaplaan: põlevkivitööstus saab hapniku, naabrid CO2-e". *Delfi,* 16.08.2016.
[146] Energiamajanduse arengukava aastani 2030
[147] Põlevkivimaa visioonitu tulevik. *Müürileht,* 30.01.2017.

utilization of oil shale. According to the new development plan, the mining limit would remain at 20 mln tonnes for the next 15 years and two new mines would be opened during that period[148]. The Minister of Environment Marko Pomerants, while acknowledging that Estonia will need to stop relying on oil shale, saw no chance of that happening in the next 15 years[149]. Prime Minister Taavi Rõivas, on the other hand, said that the government had already taken into consideration the consequences of the climate agreement before drawing up the development plan[150]. In 2016, a working group was assembled with the task to compile a report about the best available technologies (BAT) for the utilization of oil shale with maximal efficiency. The report was then to be used by the government to fight for new exceptions from the EU law for the oil shale industry[151]. Additionally, an implementation programme for the new development plan was agreed upon based on the report. The steps included investments by the state in the amount of 5,7 mln € for raising the efficiency of the oil shale sector[152].

4.2.4.3. Consumers and suppliers

The world crude oil price fell almost two times from 2014 to 2015 and continued to drop in 2016. This caused serious economic difficulties for the oil shale industry as production in the facilities based on old technologies became economically infeasible. Developments in the renewable energy sector included growth in the installation of solar panels by micro-producers as well as the local development and production of technologies such as solar panels and wind turbines[153].

4.2.4.4. Industry strategies

By 2014, the period of massive investment into environmental innovation was over for both Eesti Energia and VKG. Some new developments included the continuing installation of sulphur and nitrogen capture systems on the existing power plants. Additonally, there was a tight cooperation between different enterprises in the oil shale sector for the full utilization of residues and by-products. For example, the residues of the oil production process were used in the kilns of Kunda Nordic Tsement for the burning of clinker[154]. 2015 also marked the end of the temporary status for the Estonian oil shale industry in the EU and from January 2016, all of the environmental directives of the EU were applied to the oil shale sector. As a result, two old energy blocks in the Balti power plant of Eesti Energia were closed as the renovation of them was not considered reasonable[155]. All

[148] „VAATA, mis saab Eesti põlevkivist järgmise 15 aasta jooksul“. *Delfi*, 17.12.2015.
[149] „Marko Pomerants: põlevkivi kasutamine peab hakkama vähenema hiljemalt 15 aasta pärast“. *Delfi*, 14.12.2015.
[150] „Taavi Rõivas: Eesti on Pariisi kliimakokkulepetega juba arvestanud“. *Postimees*, 16.12.2015.
[151] “Ministeerium loob põlevkivi kasutamise säilitamiseks töörühma”. *Postimees*, 21.06.2016.
[152] “Riik soovib põlevkivisektorit muuta tõhusamaks”. *Postimees*, 06.10.2016.
[153] Taastuvenergia aastaraamat 2015
[154] Tsemendiwabrik 2015
[155] Eesti Energia Aastaaruanne 2015

of the other blocks had been renovated and continued work. As for diversification, Eesti Energia started the production of fertilizers based on spent shale[156].

The plan of the government to increase environmental charges at the time of economic uncertainty was met by an unprecedented wave of contestation from the oil shale industry in 2014. The Federation of Estonian Chemical Industries which launched a massive campaign called "Our welfare lies in our natural resources!" the message of which was that the tax raises would lead to the bankruptcy of the whole industry (figure 16)[157]. As a result, 24 000 people in Ida-Virumaa would become unemployed, annual tax revenue in the amount of 250 mln € would be lost and Estonia would renounce its energy security and independence. In addition, the chairman of the federation Hallar Meybaum said that there were no alternatives to fossil fuels and that "stories about wood and wind as the basis of our energy system belong to the fairy tale genre"[158]. This statement was criticized by the Ministry of Environment, the Renewable Energy Council and the Council of Environmental NGOs who accused the federation of spreading false information and manipulating with the lawmakers and the public[159]. At the end of 2014, however, the Ministry of Environment surrendered to the lobby of the Federation of Estonian Chemical Industries as the new legislation prescribed an annual rise in tax rates by 3-6% for the next ten years instead of the initially planned 20%.

Figure 16. Posters from the campaign "Our welfare lies in our natural resources!"[148].

[156] "Eesti Energia hakkab põlevkivituhast tehtud väetist müüma". *Postimees*, 21.04.2016.
[157] Meie õnn on meie maavarad!
[158] „Keemiatööstur: lood metsast ja tuulest kui energeetika alustalast on muinasjutt". *Delfi*, 20.07.2014.
[159] „Avalik pöördumine: Keemiatööstuse Liidu maavarade kampaania eksitab avalikkust". *Delfi*, 15.10.2014.

At the same time, the industry was dealing with problems caused by the dropping world crude oil price. At the end of 2014, VKG announced the laying off of several hundred employees due to the closing of the old Kiviter oil factories. As the government responded quickly by raising mining limits, the factories were re-opened and people were re-hired[160]. Months later, the third new oil factory based on the Petroter technology was opened[161]. However, as the oil price continued to fall, in January 2016 VKG announced it had to lay off another 500 employees and that in these economic conditions, the company "could survive for no more than another 24 months"[162]. The economic downturn also brought difficulties for Eesti Energia who had to lay off about 250 miners and for Kunda Nordic Tsement as the closing of cement production at one of the two rotary kilns led to about 30 people losing their jobs[163]. In the Ministry of Economic Affairs, preparations continued for the legislation which would make the oil shale extraction charges depend on the world oil price. In addition, demands were made by industry representatives for a temporary reduction of all environmental charges[164]. The government reacted quickly again and arranged a symbolic meeting in March in the city of Narva where the ministers decided to reduce most of the environmental charges on the industry to the level of 2009 until the end of 2017[165]. The decision which saved 43 mln € for the sector was applauded by the industry but heavily criticized by others, including the Minister of Environment Marko Pomerants who pointed out that it means heavy cuts for the budget of the state-funded Environmental Investment Centre[166]. The Council of Environmental NGOs issued a statement in which they said that the abrupt reduction of environmental charges is against the law[167]. Moreover, Rene Tammist from the Renewable Energy Council claimed that the "favouring of oil shale production has become a norm in Estonia that the lawmakers are not willing to change even in a drastically changed economic situation"[168]. The journalist and energy expert Andrus Karnau commented that the oil shale industry is "just too big to let it go bankrupt"[169]. The Federation of Estonian Chemical Industries responded to these comments by saying that the state "needs to develop further that which has been accomplished and not destroy it". The Federation also advised the environmental organizations "not to bite the hand that feeds", referring to the fact that several NGOs are partly financed with the tax money collected from the oil

[160] "Seadusemuudatuse kiire mõju: pool aastat tagasi koondanud VKG loob uusi töökohti". *Delfi,* 18.06.2015.
[161] VKG Aastaraamat 2015
[162] "VKG suuromanik pärast 500 inimese koondamist: 24 kuud suudame veel elus püsida". *Delfi,* 18.01.2016.
[163] "Eesti Energia koondab Narvas 150 kaevurit". *Postimees,* 11.12.2015; "Kunda Nordic Tsement koondas kolmkümmend inimest". *Postimees,* 27.05.2015.
[164] "VKG soovib ressursi- ja saastetasude ajutist kaotamist". *Postimees,* 26.01.2016.
[165] "Valitsus vähendab ajutiselt põlevkivitööstuse tasusid". *Postimees,* 03.03.2016.
[166] "Põlevkivitöösturid kiidavad ressursitasude alandamist". *Postimees,* 04.03.2016; "Pomerants: ressursitasude alandamine vähendab keskkonnainvesteeringuid". *Postimees,* 04.03.2016.
[167] "Keskkonnaühendused: keskkonnatasude järsk langetamine on vastuolus seadustega". *Delfi,* 15.04.2016.
[168] "Eesti peaks valmistuma hoopis põlevkivienergeetika lõpuks". *Delfi,* 18.03.2016.
[169] "Andrus Karnau: põlevkivitööstus – pankrotti laskmiseks lihtsalt liiga suur". *Postimees,* 11.03.2016.

shale industry[170]. In July 2016, VKG re-hired 350 of the people that had been laid off in January as production continued again in the old Kiviter factories[171].

[170] "Keemiatöösturite vastulause keskkonnaühendustele: ei tasu hammustada kätt, mis toidab". *Postimees,* 19.04.2016.
[171] "Viru Keemia Grupp võtab uuesti tööle 350 inimest". *Postimees,* 07.07.2016.

5. Analysis and discussion

The analysis and discussion of the results in presented in this chapter. I start with pattern-matching the evidence with the theoretical mechanism of industry destabilisation (table 1) and then move on to explaining the outcome of the process by answering the research questions presented at the end of chapter 2. Based on the analysis, I summarize the conclusions from this case study for transition research and offer some policy recommendations for the sustainable development of the Estonian energy system and the oil shale industry. The chapter ends with limitations and possibilities for further research.

5.1. Pattern matching

I start the pattern-matching by comparing the overall pattern of events in the case with the model and then analyse the fit of each period in detail. The overall pattern of the process from 1995 to 2016 partly fits with the five-phase model. The fit with the model is evidenced by the following trends:

1. with regard to activism, the attention to climate change increases continuously (from a few activists to organized lobbying and demonstrations);
2. with regard to policymakers, early concerns are followed by parliamentary debates (including the ratification of the Kyoto protocol) and the eventual introduction of new comprehensive political strategies (The Basis of Climate Policy until 2050);
3. with regard to consumers and suppliers, early demand from "green" consumers leads to the expansion of the renewable energy market niche;
4. with regard to the industry, there is evidence of both incremental innovation and investments into more radical solutions as well as the organization into a closed industry front and normative contestation and opposition to the new policies.

There are also some significant deviations from the model. These include the following:

1. climate change simultaneously competes with other relevant problems such as other environmental concerns, energy security and employment issues (figure 8);
2. major economic pressure is inflicted not so much by the expansion of the renewable energy technologies niche as by the fluctuations in the world crude oil price;
3. major political pressure is initiated at the global (UNFCCC, Kyoto protocol, Paris agreement) and international (EU climate and energy framework, EU carbon trading emissions system) level rather than the national level. Most importantly, the pressures on the

industry are mediated and neutralized by consistent support by the national government to the oil shale sector;

4. the industry skips the first steps of denying or downplaying the issue and moves right into incremental innovation and diversification. However, radical change and re-orientation is mostly avoided because of continuing governmental support to the incumbent regime and the lack of an agreed-upon alternative political direction. Furthermore, periods of destabilising external pressure are followed by "golden eras" caused by the favourable economic conditions of the rising world crude oil price.

Table 13. Actual pattern of events compared with the theoretical one for the first period (1995-2002).

Phases	External pressures			Industry
	Activists and social movements	Policymakers	Consumers and suppliers	
Phase 1	x			
Phase 2		x		x
Phase 3		x	x	
Phase 4				x
Phase 5				x

When looking at each period in detail, the first period (1995-2002) fits with phases 1 and 2 to the extent that climate change is framed as a problem on the national scale after the Kyoto protocol is ratified by the parliament. However, there is also evidence of all the other periods (table 13). Early demand from "green" consumers leads to Eesti Energia establishing a renewable energy package for domestic households (phase 3). Interestingly, the industry skips the first steps of denying or downplaying the issue and moves right into 1) adopting incremental solutions by investing into renovating old production facilities (phase 2), 2) early diversification by producing fine chemicals and recycling old car tires for oil (phase 4) and 3) temporary dissolution following the bankruptcy of Kiviter (phase 5). The general note is thus that soon after the problem is framed, the strategies of policymakers, consumers and suppliers as well as the industry shift quickly into the next phases. Other deviations from the mechanism include action by government towards the privatization of state-owned oil shale companies as well as the negotiation of a temporary status for the industry from the EU. Two distinctive trends can be noticed that are characteristic of not only this period but the case study general: 1) there are several competing problem framings (other environmental concerns as well as energy security and employment issues) and therefore multiple "issue lifecycles" are simultaneously unfolding; 2) from the start, radical solutions to the problems (long-term plans for a renewable energy transition) are proposed not by governments or industry representatives but environmental activists and advocacy organizations.

Table 14. Actual pattern of events compared with the theoretical one for the second period (2003-2009).

Phases	External pressures			Industry
	Activists and social movements	Policymakers	Consumers and suppliers	
Phase 1				
Phase 2	x			x
Phase 3	x			x
Phase 4		x	x	
Phase 5				

The second period (2003-2009) partly fits with phases 2, 3 and 4 (table 14). With regard to activism, 1) several existing or newly-formed advocacy organizations (Estonian Green Movement, Estonian Fund for Nature, Estonian Green Party) become engaged in the fight for climate change, 2) climate change enters the public opinion as a serious global environmental threat and 3) politicians are lobbied to take action on the issue (by delivering symbolic gestures and "awards"). Also in accordance with phase 2, the industry responds by forming a closed front (the Federation of Estonian Chemical Industries) while continuing with incremental changes (new environmental management systems, Enefit and Petroter technologies and end-of-pipe solutions like sulphur treatment equipment). However, there are also signs of investment into more radical innovation (phase 3) as far as a shift of focus towards the full utilization of oil shale and all its residues is concerned. Investments are also made into renewables by Eesti Energia (wind farms at Aulepa and Narva and the waste-to-energy unit at Iru power plant). Furthermore, there are some minor changes in the identities of the companies as they officially acknowledge climate change and embrace the principles of sustainable development. However, there are doubts as to whether these changes are substantial. Some new environmental policies are introduced by the government but there are significant differences between policymaking at the EU and national level as the implementation of the more radical EU directives is avoided or delayed due to the active support for the oil shale industry by the Estonian government. Moreover, free carbon credits are received from the EU for the oil shale industry as a result of negotiations led by the Minister of Economic Affairs who also denies climate change. The government also takes some steps towards renewables though as the introduction of renewable energy subsidies leads to a significant expansion of the renewable energy market niche (phase 4). Although advocacy groups come forward with another long-term strategy for a renewable energy transition, the possibility is not seriously considered.

Table 15. Actual pattern of events compared with the theoretical one for the third period (2010-2013).

Phases	External pressures			Industry
	Activists and social movements	Policymakers	Consumers and suppliers	
Phase 1				
Phase 2				x
Phase 3	x			x
Phase 4				
Phase 5				

The third period (2010-2013) partly fits with phases 2 and 3 (table 15). As for activism, the environmental organizations regularly demand action against climate change from the Ministry of Economic Affairs and the Ministry of Environment (by presenting symbolic gestures and "awards"). Additionally, a new organization (the Renewable Energy Council) is created that presents yet another long-term plan for a renewable energy transition. The industry continues with incremental solutions (phase 2) based on the rocketing world crude oil price. These include the establishment of several new oil factories and the Auvere power plant as well as the installation of end-of-pipe technologies like sulphur treatment equipment and nitrogen capture systems. These solutions are supported by government investments financed by another set of free carbon credits received from the EU. Eesti Energia also continues to invest into renewables (phase 3) as new wind farms are built to Paldiski and Pakri and a combined heat and power plant is opened in Paide. However, several other developments in the renewable energy sector are put on hold because of lacking policy support. In addition, the environmental objectives of the national development plan for oil shale utilization are left unattained.

Table 16. Actual pattern of events compared with the theoretical one for the fourth period (2014-…).

Phases	External pressures			Industry
	Activists and social movements	Policymakers	Consumers and suppliers	
Phase 1				
Phase 2				
Phase 3	x			
Phase 4		x		
Phase 5		x		x

The outcome of the fourth period (2014-…) is still undecided but there is strong evidence of phases 4 and 5 (table 16). Ahead of COP21, decisive action against climate change is demanded in the media and even a demonstration is held in Tallinn. After the global Paris agreement is achieved, the government introduces a first comprehensive strategy on climate change mitigation (phase 4) as well as a new national development plan for the energy sector. Although these documents attract

criticism for being conservative and unambitious, the changed economic frame conditions that result from the increased tax rates and the plummeting world crude oil price push the industry into full destabilisation, including the closing of production facilities and a massive lay-off of employees (phase 5). Potential bankruptcy is avoided by quick reactive support from the government (additional mining permits and temporary tax reductions). At the same time, new development plans are agreed upon in which the oil shale mining capacity is still fixed at 20 mln tonnes per year until 2030 and massive additional investments into the oil shale industry are foreseen. This gives reason to think that the re-orientation of the industry is not to be expected soon.

5.2. Explaining the outcome

The outcome of the destabilisation process can now be explained by addressing the research questions of this thesis:

1. In what ways is the Estonian oil shale industry embedded in the local landscape?
2. What is the combined effect of external pressures and local embeddedness on the destabilisation of the Estonian oil shale industry from 1995 to 2016?

With regard to the first question, there is significant evidence of societal, network and territorial embeddedness. The history of the long Soviet occupation during most of the 20th century still bears an influence on Estonian politics and can be seen as a form of the societal embeddedness of economic activity. In the context of this study, this is most evident in the arguments surrounding energy security. While energy security was one of the most discussed issues over the period of the case, the meaning of the term was hardly ever disputed. “Energy security” almost always meant that all energy needs to be produced in Estonia and the reliance on import fuels is to be avoided. In this sense, the term is closely related to national independence and sovereignty which is an extremely important part of the Estonian culture. On the other hand, the few opponents to the predominant use of the term stressed that relying on this meaning of “energy security” amounts to nothing more than raising unaccounted fear towards Russia. Alternative meanings were proposed which associated energy security with renewable sources and decentralized production. Another serious concern related to the oil shale sector and the Soviet past is the issue of employment in the industrial Ida-Virumaa region. In 2015, 13% of all the employed people in Ida-Virumaa were working in the oil shale industry. In addition, the industry created thousands of indirect jobs in related sectors such as catering, accommodation, transport and construction (KPMS 2015). Other job opportunities are not so easy to come by in the region as the unemployment rate (13,5%) is almost twice as the Estonian average (6,8%) (Statistikaamet 2016b). The importance of employment issues was exaggerated by

the fact that 66% of the population of Ida-Virumaa is of foreign (mainly Russian) origin. Hence, it is feared that a major loss of jobs in the oil shale industry would cause serious economic problems for these people and could even lead to a "social catastrophe".

The association of energy security with independence from foreign (Russian) energy can also be seen as a form of territorial embeddedness because 1) Estonia is situated next to Russia, 2) all the oil shale resources are found in north-eastern Estonia near the Russian border and 3) all the main power plants and oil factories are situated in the same region, i.e. the industry has been established historically around the same site. The social situation in Ida-Virumaa characterized by the large foreign population and high unemployment rate is another type of territorial embeddedness because employment issues have been an important argument for industry representatives, politicians and the local people in the unfolding of industry destabilisation.

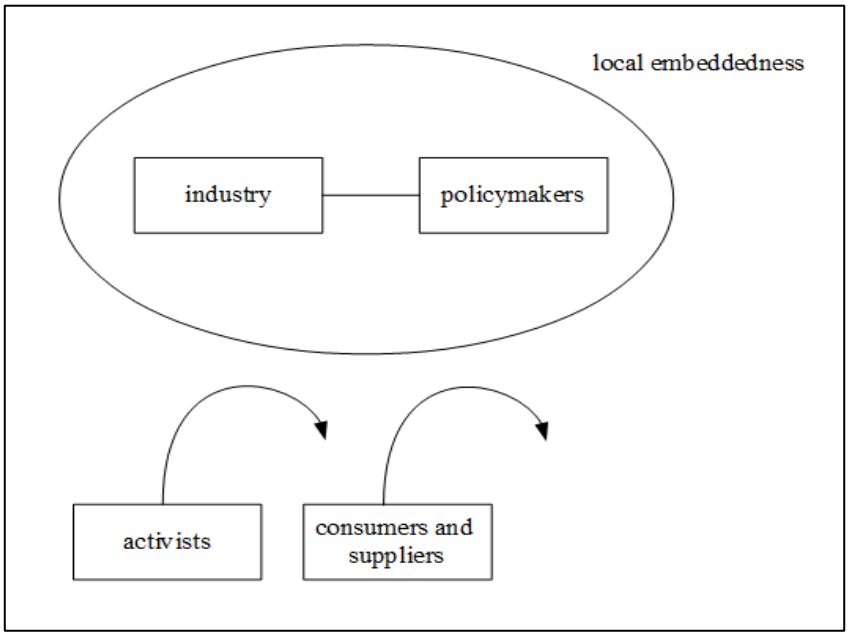

Figure 17. Combined effect of external pressures and local embeddedness on industry destabilsiation.

Network embeddedness is manifested in the substantial political support over the years by the national government for the oil shale industry. Policymakers and industry representatives have often publicly prioritized the same issues and arguments, especially when facing normative contestation from environmental activists. Figure 8 shows that climate change and other environmental problems have been the most important issues for activists while industry representatives, on the other hand, have emphasised the importance of employment and energy security. Climate change has not been an important issue for either industry representatives or policymakers, with the latter being mainly concerned with other environmental problems, energy security and employment. The mutual relationships between policymakers and the industry have been evidenced most in their common

concern over energy security, with both sides using the same arguments on numerous occasions when facing external pressure (see sections 4.2.2.2, 4.2.3.1, 4.2.4.2). On the one hand, the strong links between the state-owned Eesti Energia and the government are obvious, with the Minister of Economic Affairs acting as the representative of the sole shareholder and the highest directing body of the company. However, the last few years have also seen increasing ties between the government and the privately owned VKG as their mutual concern over the turbulent employment situation in Ida-Virumaa have led the government to react quickly and implement substantive policy changes in support of the company.

Table 17. Governmental support for the industry in each period.

Period	Pressures on the industry	Governmental actions
1995–2002	1) Russian financial crisis; 2) Kyoto protocol adopted; 3) unification negotiations with the EU impose stricter environmental regulations	1) raise in environmental tax rates less than initially planned; 2) Estonia achieves a temporary status for the oil shale industry from the EU as part of the unification negotiations
2003–2009	global financial crisis	raise in environmental tax rates less than initially planned
2010–2013	rising oil price	free carbon credits requested from the EU and used for investment into new oil factories
2014–…	1) dropping oil price; 2) Paris climate agreement	1) raise in environmental tax rates less than initially planned; 2) extra mining permits granted for the oil shale industry; 3) tax rates reduced to the level of 2009 on a temporal basis

With regard to the second question, the evidence suggests that the various forms of local embeddedness have an opposite effect to industry destabilisation (figure 17). This was evident on numerous occasions when the industry faced external pressures from the social and economic environments (see sections 4.2.2.2, 4.2.2.4, 4.2.3.2, 4.2.4.2, 4.2.4.4.). At times of increased pressure, arguments about energy security and employment were the main factors influencing the decisions of the industry and the government. Perhaps the most significant finding still was the mismatch between international political strategies adopted in UNFCCC and EU agreements and the actions of the national government in implementing them (table 17). Ever since the Kyoto protocol, the Estonian government has met the minimum requirements for the reduction of greenhouse gas emissions and other measures of sustainability set forth in international legislation while at the same time constantly bargaining favourable exceptions for the oil shale industry. The disagreement with international conventions and standards was often explicit as the Estonian government held ongoing negotiations with the European Commission before and after joining the EU for special conditions for oil shale, including free credits from the carbon emissions trading

system that were used for investments into the oil shale sector. At other times, however, the government pursued actions that were seemingly in contradiction with international policies while rhetorically declaring support for them. For example, the adoption of the Paris agreement was publicly greeted by Estonian government officials. However, new national development plans based on oil shale were drawn up at the very same time because the government believed that the climate agreement supported the development of the oil shale industry. Moreover, governmental support has not always been strategic but rather reactive as indicated in the quick implementation of new favourable legislation for the industry during the last economic turbulence in 2015 and 2016. To sum up, all this implies that the network ties between the industry and policymakers have often proven to be crucial and have significantly altered the unfolding of industry destabilisation during times of heavy external pressure.

5.3. Implications for the research on industry destabilisation

With regard to the research on industry destabilisation, the aim of this thesis was to address two gaps in the existing literature: 1) why does industry destabilisation often unfold in a nonlinear way and 2) in what ways do local geographical features influence industry destabilisation? On the basis of this case study, we can now attempt to fill these gaps.

Conclusion 1. The linear unfolding of destabilisation is altered by economic fluctuations and political support, not so much by environmental concerns.

Concerning the first question, I found that there were mainly two factors that altered the linear sequence of the destabilisation phases: 1) economic fluctuations (caused by changes in the world crude oil price) and 2) political support for the industry. The economic advantages from the rising oil price between 2003 and 2008 and again between 2010 and 2013 neutralized the pressure from the renewable energy niche which also expanded substantially in the late 2000s. The advantages were amplified by governmental actions that offered additional funds and support for new oil factories while hindering the further development of the renewables niche by postponing new legislation. However, the industry crumbled fast as the oil price dropped abruptly in 2015 and full destabilisation and a potential bankruptcy was only avoided with the quick reaction of the government that significantly relieved the charges on the industry. Moreover, the bankruptcy of Kiviter in 1998 during the Russian financial crisis showed that without substantial political support, the capacity of the industry to survive through economically difficult periods is rather low. The findings thus confirm the suggestion by Turnheim (2012: 291-292, 307-308) that political support may have significant impact on the unfolding of industry destabilisation.

Conclusion 2. Industry actors and policymakers tend to form core alliances at the regime level.

The reason for the political support for the industry was that there were strong network ties between industry representatives and policymakers. Government officials often justified the support for the industry by using the same arguments as industry representatives themselves, for example claims to energy security and employment. Furthermore, the government often revised its initial plans and responded reactively to the needs and pleas of the industry. This finding confirms the earlier hypothesis by Geels (2014b: 26) that industry actors and policymakers tend to form core alliances based on mutual dependencies that contribute to the lock-in of the incumbent regime.

Conclusion 3. Industries are societally and territorially embedded in local landscapes.

It is likely that the network ties between the industry and policymakers are in turn based on the fact that the industry is societally and territorially embedded in the local landscape. On the one hand, Estonia has a unique reserve of oil shale resources almost all of which is located in the Ida-Virumaa region and the industry has historically developed around the same site. On the other hand, the societal embeddedness can be traced back to the Soviet past and the unstable social and economic situation in the industrial Ida-Virumaa region which is still mostly foreign-populated and has a higher unemployment rate than in the rest of Estonia. Any kind of social or economic turbulence in the region is believed to pose a threat to our national independence and security due to the geographic position of Ida-Virumaa in north-eastern Estonia near the Russian border, hence the appeals for increasing energy security and employment rates. Societal embeddedness is also evidenced by the lack of alternative visions as a centralized energy system based on oil shale has been considered to be a guarantee for energy security by the industry as well as policymakers. This understanding has probably evolved through path-dependent processes that have been unfolding for almost a century and have resulted in the popular discourse that oil shale is our "national wealth" and that the unique competence in developing oil shale technologies gives Estonia a competitive advantage in the world market (Holmberg 2008).

Conclusion 4. The full destabilisation of industries involves "disembedding" the industry from the local landscape.

As industries are embedded in local landscapes, the full destabilisation of industries requires that the ties between the industry and the local landscape are "disembedded" and transformed. This does not just happen by itself but has to be strategically planned and coordinated by activists, policymakers and consumers and suppliers. Depending on the extent of external pressures, this process can lead to either the re-orientation of the incumbent industry or a transition towards sustainability of the whole national energy system. I suggest that when the number, intensity and

alignment of pressures is low or moderate, then the ties between the industry and the landscape are likely to be only partially broken and transformed and the industry will probably go down the re-orientation path (figure 18). This means that the incumbent industry will hold its dominant position in the regime by orienting towards new markets. However, when the number, intensity and alignment or pressures is high, then the ties between the industry and the local landscape are likely to be fully broken and transformed and the industry will probably dissolve and be replaced by an alternative technology niche that represents a completely new industry. The latter pathway can be seen as a system-level transition as the incumbent industry loses its position and the whole industry regime is reconfigured (figure 19).

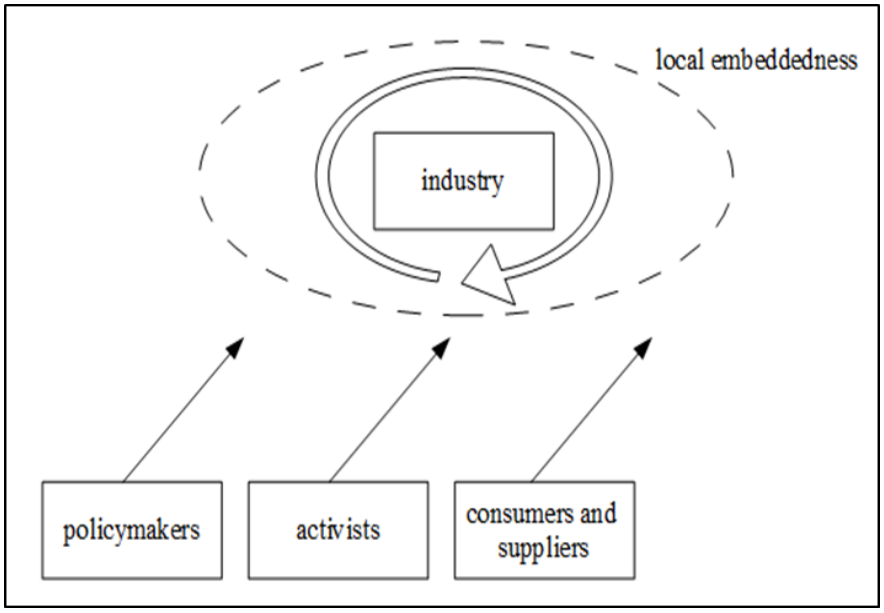

Figure 18. Industry re-orientation.

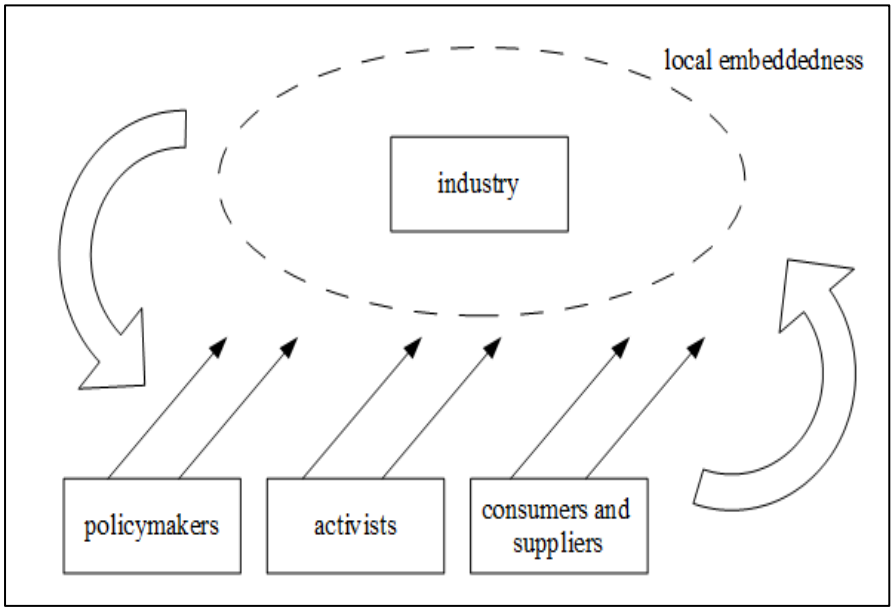

Figure 19. System transition.

Conclusion 5. The alignment of problems and solutions presents opportunities for radical change but political action is also needed.

One way of breaking and transforming the ties between the industry and the local landscape is developing alternative solutions to the existing problems. These might have to do with new technologies but also with discourses and visions. An interesting finding was that on numerous occasions over the years, activists presented the government with a comprehensive alternative strategy for the long-term development of the energy sector based on renewable energy (see sections 4.2.1.2, 4.2.2.1, 4.2.3.1). However, there was little response from the government and the rest of society and the options were never seriously considered. Another significant development was the creation of the Renewable Energy Council which acted as a successful link between activists and renewable energy entrepreneurs, adopting both advocacy tasks as well as providing support for technological development. The creation of the organization was important for bringing about the shift of emphasis from problems to solutions and increasing the alignment of pressures on the industry. This also confirms the suggestion by Geels and Penna (2015: 81) that in the later stages of destabilisation, the problems are increasingly replaced by opportunities for alternative development paths.

Conclusion 6. Introducing new ways to frame familiar problems might lead to radical change.

Another way of transforming the discursive landscape is to introduce alternative interpretations of familiar issues. This case study showed that in addition to climate change, several different issues like energy security, employment and other environmental problems simultaneously competed for public and political attention. As energy security and employment proved to be more important than climate change, alternative framings could be used as a discursive tool to fight the industry and policymakers "with their own weapons". This would include attempts at introducing new meanings to these issues that would open people's minds towards envisioning alternative futures. An attempt at this was made in 2014 and 2015 when the Renewable Energy Council and the Estonian Green Movement launched a campaign in which they tried to re-interpret the meaning of "energy security", claiming that real energy security lied in renewable energy and decentralized production. This kind of alternative framings could help garner wider democratic support and initiate large-scale demands for change from the civil society without which the government is unlikely to consider new radical solutions. This would again confirm the finding by Geels and Penna (2015: 81) that patterns of destabilisation can be altered by changes in the meaning of issues.

Conclusion 7. Symbolic changes in mission and identity might be easier than radical changes in technologies.

The last finding of this study contradicts the earlier finding of Turnheim and Geels (2013: 1765) that the mission and identity of industries exhibit the highest degree of lock-in and are least susceptible to change. This case study showed that most of the companies, including Eesti Energia, VKG and Kunda Nordic Tsement willingly incorporated elements of corporate social responsibility and sustainable development into their identities and strategies while at the same time expanding oil shale usage and adopting only incremental changes in technologies. This suggests that it is relatively easy for companies to make rhetorical and symbolic changes in their identity but these might amount to little more than "greenwashing" if not followed by radical changes in technologies.

5.4. Policy recommendations

Systemic and strategic policymaking in the 21st century means finding the right balance between the social, economic and environmental dimension of sustainable development. To date, it has not been easy for the Estonian government to balance these aspects. This is because radical political changes involving the possible dissolution of existing industries are obviously extremely difficult for those making the decisions as well as for the people related to the industry who suffer the consequences of these decisions. Based on this case study, I suggest some basic steps for developing sustainable climate and energy policies in Estonia.

Recommendation 1. Make use of the "perfect storm" created by the alignment of pressures.

Previous research has shown that governments are well-advised to make use of "perfect storms" where pressures on multiple dimensions become aligned in the same direction (Turnheim 2012: 294). This kind of situation can also be seen as a "window of opportunity" that presents favourable conditions for new radical solutions to break through to the incumbent regime (Geels 2005). Evidence suggests that we are experiencing a similar situation now. From the end of 2014 until now, we have seen a remarkable fall in the world crude oil price, the adoption of the Paris agreement on climate change and a rapid increase in the competitiveness of renewable energy technologies. All these developments present very serious challenges for the oil shale industry and pose questions about whether and for how long the industry is able to survive. This suggests that now would be the best time to consider alternative future pathways and implement radical political changes.

Recommendation 2. Introduce alternative interpretations of the meaning of energy security and the economic prosperity of Ida-Virumaa.

Radical policy changes need large-scale democratic support and therefore require people to imagine alternative possibilities and adopt new beliefs and mindsets. As energy security and employment issues have proven to be the main arguments against environmental protection and radical innovation, it is necessary to introduce new interpretations to these issues that would open people's minds towards envisioning alternative futures. This would include considering whether energy security could be enhanced by a decentralized energy system based on renewables and whether employment rates in Ida-Virumaa could be increased by a renewable energy industry that would create thousands of new and clean jobs in the region. Moreover, the entrenched image of Ida-Virumaa as "oil shale land" would need to be re-envisioned. For example, the long coastal line of the region could very well form a basis for the image of Ida-Virumaa as the "wind land", thus drawing associations to wind energy.

Recommendation 3. Revise relevant national development plans to make them compatible with long-term global goals on climate change.

The current national development plans for the energy economy and for the utilization of oil shale apply until 2030. However, national and international strategies on climate change foresee actions until 2050. While the national development plans acknowledge the need for a significant decrease in oil shale usage after 2030, no plans have been made on how this would work out in reality. Since the reorientation or collapse or old industries is a long and very difficult process, strategies for the radical transformation of the energy system and the oil shale industry need to be developed as soon as possible in order to follow through on the promises.

Recommendation 4. Draw up a comprehensive strategy for the long-term development of Ida-Virumaa based on the principles of sustainable development.

The radical transformation of the oil shale industry would probably present serious problems for the people of Ida-Virumaa. Therefore, a long-term strategy for the development of the region is needed that would attend to the social, economic and environmental needs of region. This would include support for the development of new clean industries as well as extensive retraining programmes for former employees of the oil shale industry and social protection for the people unable to find a new job. Since the industry regime is a semi-coherent structure, it might be easier for some companies to adjust to the changes than for others. For the companies in the energy industry, it might be relatively easy to reorient towards renewable energy but the situation might become very difficult for the companies relying completely on oil shale. For the latter, survival in the conditions of

increasingly stricter climate and energy policies would mean a move away from the energy sector and a substantial re-orientation towards the production of fine chemicals products. In the energy sector, support for the development of new industries is also crucial.

5.5. Limitations and possibilities for further research

There are some important limitations about the conclusions of this study. Firstly, the conclusions apply first and foremost to the energy industry. In Estonia as well as in numerous other countries, national energy systems are often highly centralized and dominated by big state-owned corporations which might make it more likely that core alliances are formed between the companies and policymakers. However, the conclusions might not apply to other sectors that are not dominated by state-owned enterprises or the protection of which is not of crucial national importance. Secondly, the specific conclusions apply mainly to Eastern European countries with a similar past of Soviet occupation as Estonia. For example, claims for energy security and independence might not be so dominant in Western states. However, the overall model of the contrary effects of external pressures and local embeddedness is expected to be generally applicable.

Further research could explore more in-depth the evolution of different framings and interpretations of disputable issues like energy security and how the changes in framings influence the unfolding of industry destabilisation. Also, further empirical examination is needed into the different ways that industries are locally embedded, including theoretical clarification of different ways of "disembedding" industries from local landscapes. Another possibility to build on existing models of industry destabilisation is to distinguish between the influence of external pressures on the national and international level. This is a promising avenue of future research as the case study showed that there can be major differences in the ways that international polciies are adopted on the national level. Moreover, there is an abundance of literature on multi-level environmental governance that could offer fruitful insights for industry destabilisation (e.g. Fairbass and Jordan 2004; Jordan 2000). Finally, empirical evidence is also needed about positive examples of how the co-operation between activists, consumers and suppliers and policymakers can enhance the development of clean industries and bring about transitions.

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Appendix A. Operational definitions of the mechanism

Phases	Activists and social movements	Policymakers	Consumers and suppliers	Industry regime
Phase 1	activists frame climate change as an issue			firms downplay the seriousness of climate change as an issue
Phase 2	1) an organization or movement is created to raise awareness about climate change, 2) climate change enters the public opinion	1) some politicians enter the public debate, 2) an informal committee is created to discuss the issue of climate change		1) firms organize into a closed industry front, 2) firms defend the domain by publicly contesting the claims of climate activists, 3) firms develop and adopt incremental technologies
Phase 3	1) debates about the framing of the issue continue, 2) politicians are being lobbied by climate activists to take action on climate change	formal hearings or debates about climate change are held in the parliament	early demand by renewable energy consumers	1) firms portray renewable energy technologies as unfeasible, 2) firms hedge by investing into renewable energy
Phase 4		government implements radical new climate policies	a renewable energy market niche is established	1) firms publicly oppose new climate policies, 2) firms diversify into new product markets
Phase 5		new policies change the economic frame conditions for the industry	mainstream preferences change towards renewable energy consumption	firms make substantial changes in 1) technologies and regulations or 2) mission and identity or 3) dissolve into bankruptcy.

Appendix B. Coding manual of the content analysis

1. Overall parameters of the text

A0 Number
A1 Date
A2 Publisher
A3 Headline
A4 Whose views are mainly represented in the article?
- 1 Journalist
- 2 Environmental activist
- 3 Politician or government official
- 4 Industry representative
- 5 Renewable energy entrepreneur
- 6 Scientist
- 7 Other

2. Categories and codes of deductive (theory-based) coding

B1 Activists and social movements
- 1 Climate change is mentioned as an issue
- 2 An organization or movement concerned with climate change is mentioned
- 3 Public opinion towards climate change is mentioned
- 4 New climate policies are advocated
- 5 None of the above are mentioned

B2 Policymakers
- 1 The creation of an informal committee concerned with climate change is mentioned
- 2 Formal hearings in the parliament about climate change are mentioned
- 3 New climate policies are mentioned
- 4 Changes in economic frame conditions are mentioned
- 5 None of the above are mentioned

B3 Consumers and suppliers
- 1 Rising renewable energy demand is mentioned
- 2 A renewable energy market niche is mentioned
- 3 Changes in mainstream preferences of energy use are mentioned
- 4 None of the above are mentioned

B4 Industry strategies
- 1 Climate change is denied
- 2 The seriousness of climate change is downplayed
- 3 A closed industry front is mentioned
- 4 The claims of climate activists are contested
- 5 An incremental technological solution by a firm in the oil shale industry is mentioned
- 6 Renewable energy technologies are portrayed as unfeasible
- 7 Investment into renewable energy by a firm in the oil shale industry is mentioned
- 8 New climate policies are opposed

9 Diversification by a firm in the oil shale industry into new product markets is mentioned
10 Substantial technological or regulative changes by a firm in the oil shale industry are mentioned
11 Substantial changes in the mission or identity of a firm in the oil shale industry are mentioned
12 The bankruptcy of a firm in the oil shale industry is mentioned
13 None of the above are mentioned

3. Categories and codes induced from open coding

C1 Alternative issue framings
1 Energy security
2 Unemployment
3 Low oil price
4 Tax revenue from the oil shale industry
5 Oil shale as the national wealth
6 Environmental damage (other than climate change)
7 Hidden subsidies for the oil shale industry
8 Decreasing oil shale reserves
9 Inefficiency of oil shale as an energy source
10 Natural habitats of the flying squirrel
11 None of the above are mentioned

C2 Alternative policies proposed and /or implemented
1 Decentralisation of energy production
2 Limiting the oil shale mining capacity
3 Renewable energy subsidies
4 Privatisation of energy companies
5 Temporary status for oil shale industry by the EU
6 Temporary reduction of environmental taxes for the oil shale industry
7 None of the above are mentioned

C3 Alternative energy sources proposed
1 Nuclear
2 Wind
3 Solar
4 Woodchips
5 Other biofuels (including waste)
6 Renewable energy sources in general
7 All alternatives depicted as infeasible
8 None of the above are mentioned

C4 Alternative industry strategies
1 Opening a new oil shale mine
2 Establishing a new power plant
3 Establishing a new oil factory
4 Cutting costs by laying off employees
5 None of the above are mentioned

Appendix C. Results of the content analysis

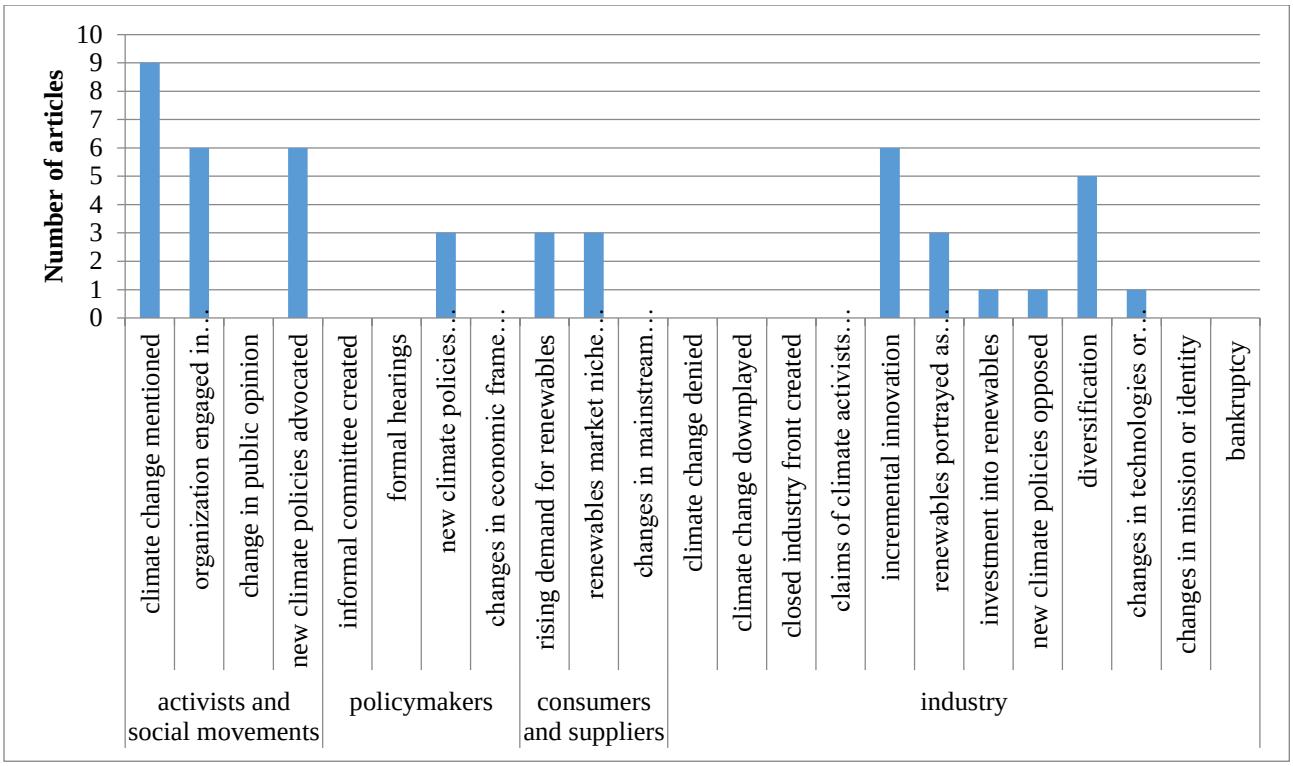

Figure XXX. Results of deductive coding (1995-2002).

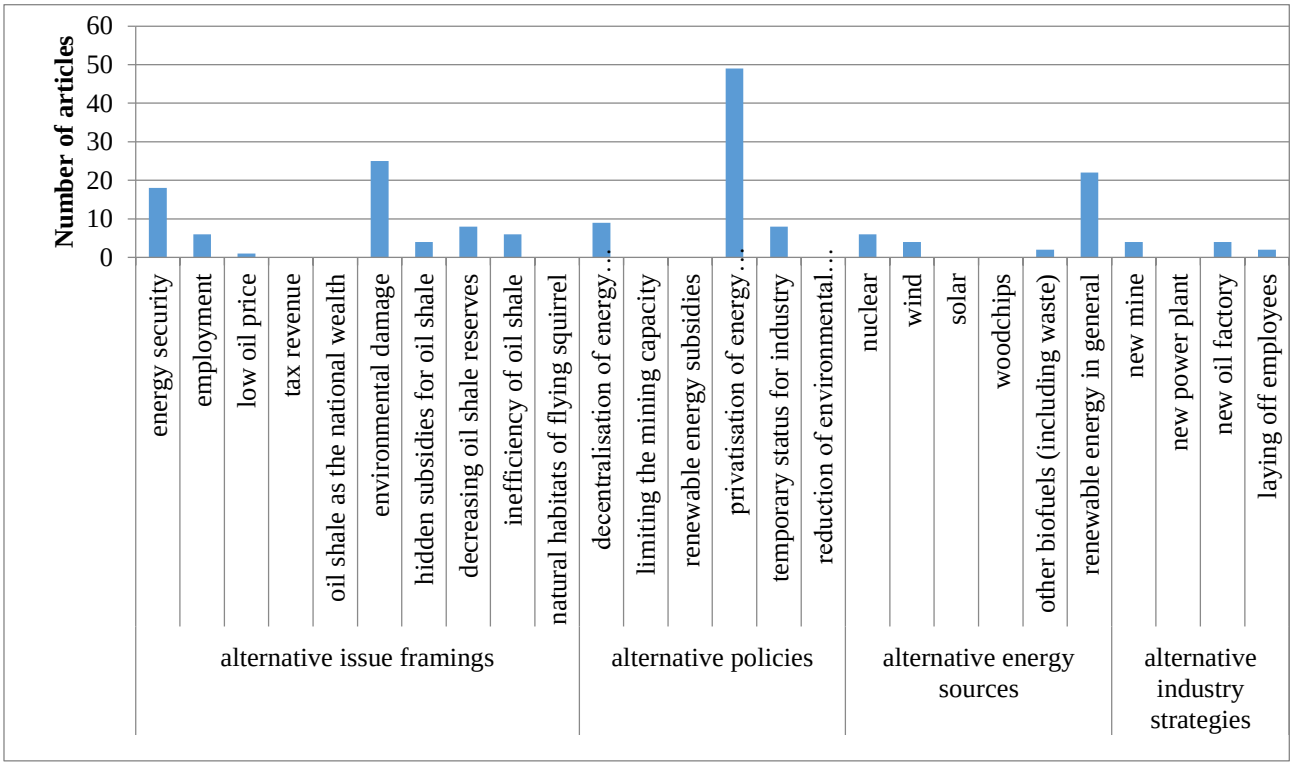

Figure 15. Results of inductive content analysis (1995-2002).

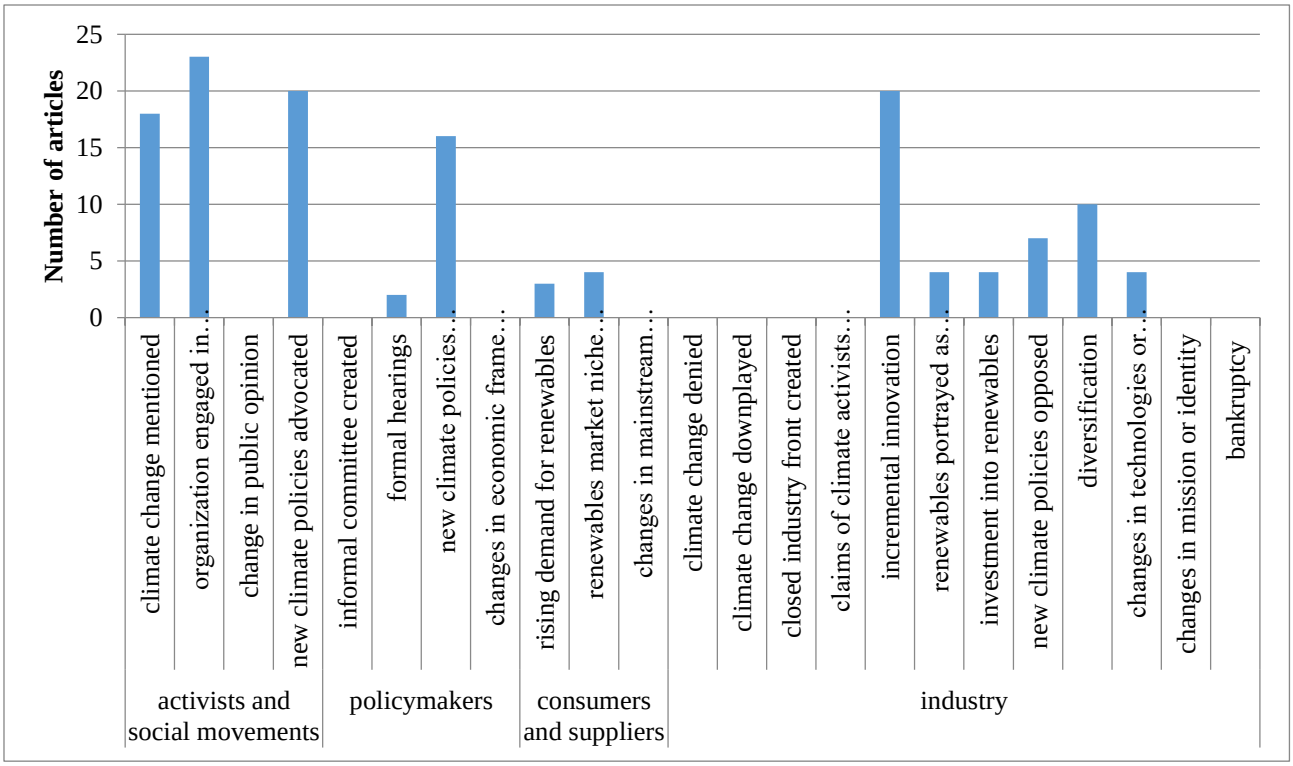

Figure 16. Results of deductive coding (2003-2009).

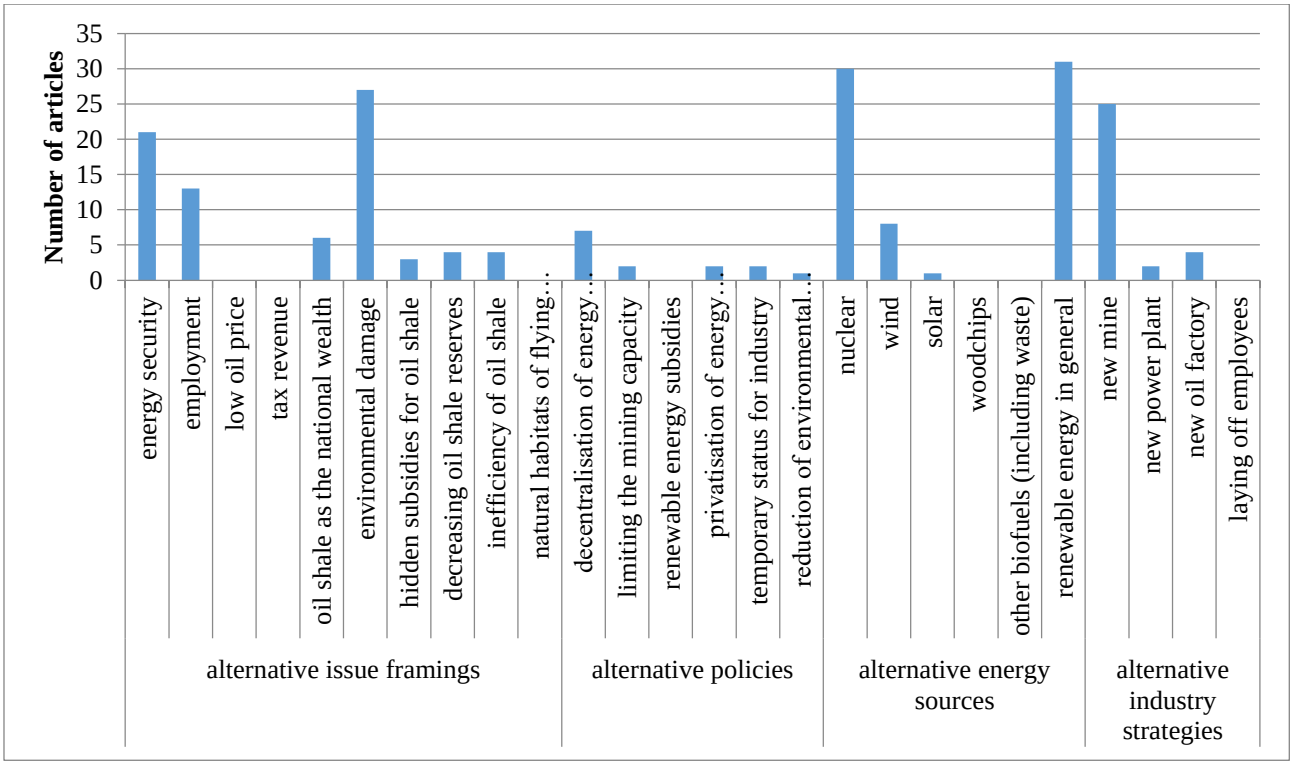

Figure 21. Results of inductive coding (2003-2009).

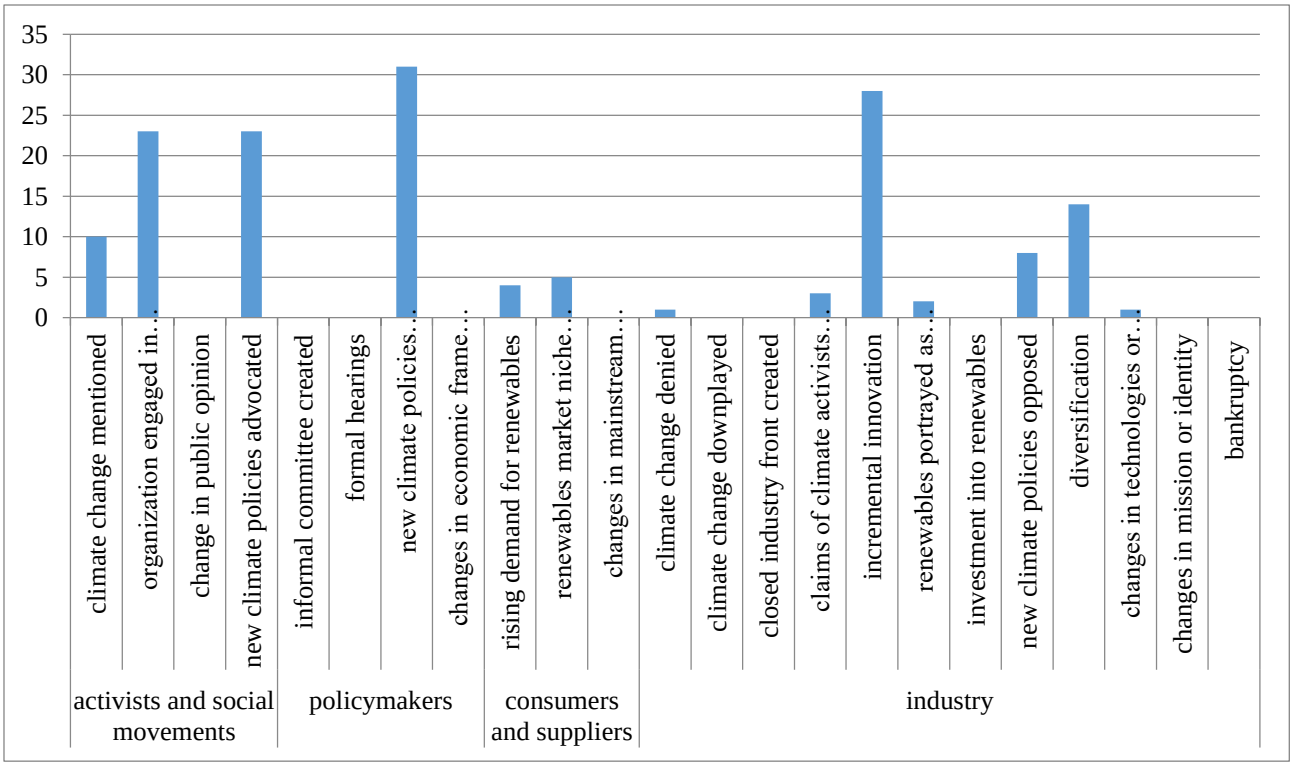

Figure 22. Results of deductive coding (2010-2013).

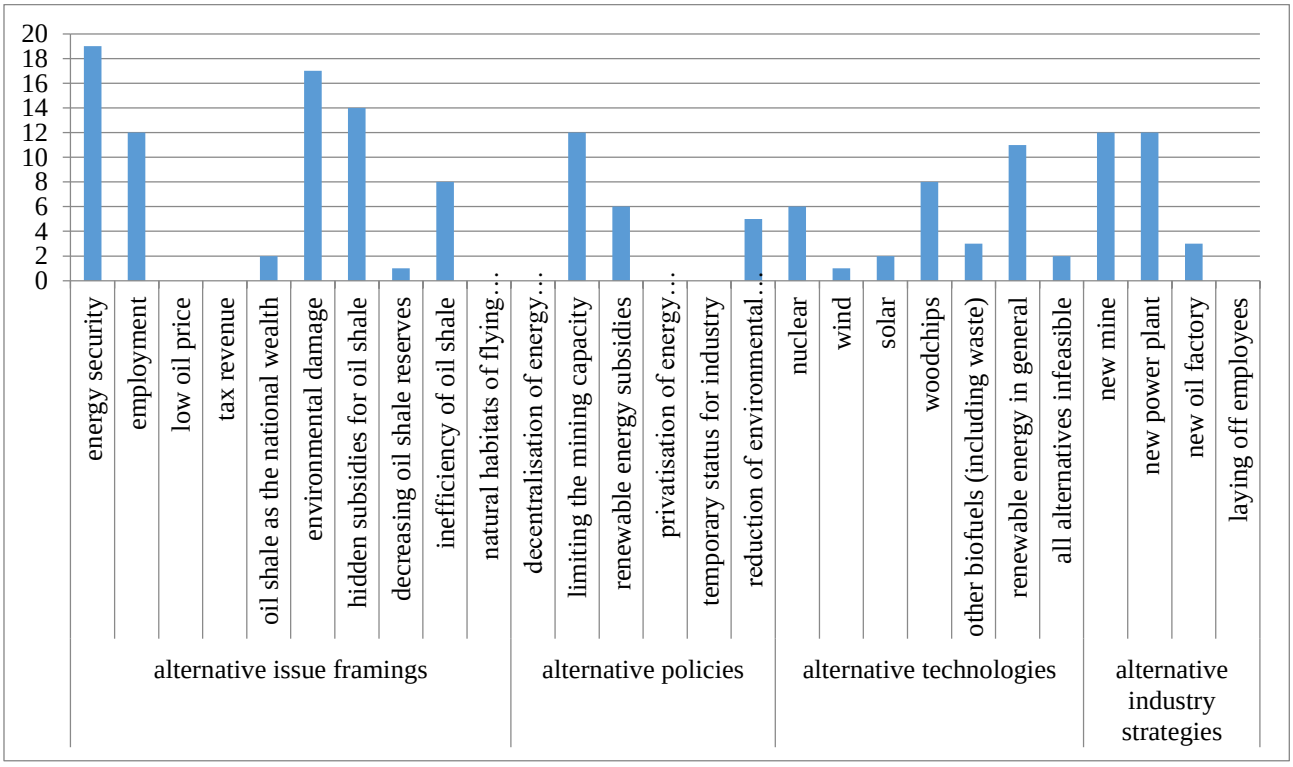

Figure 23. Results of inductive coding (2010-2013).

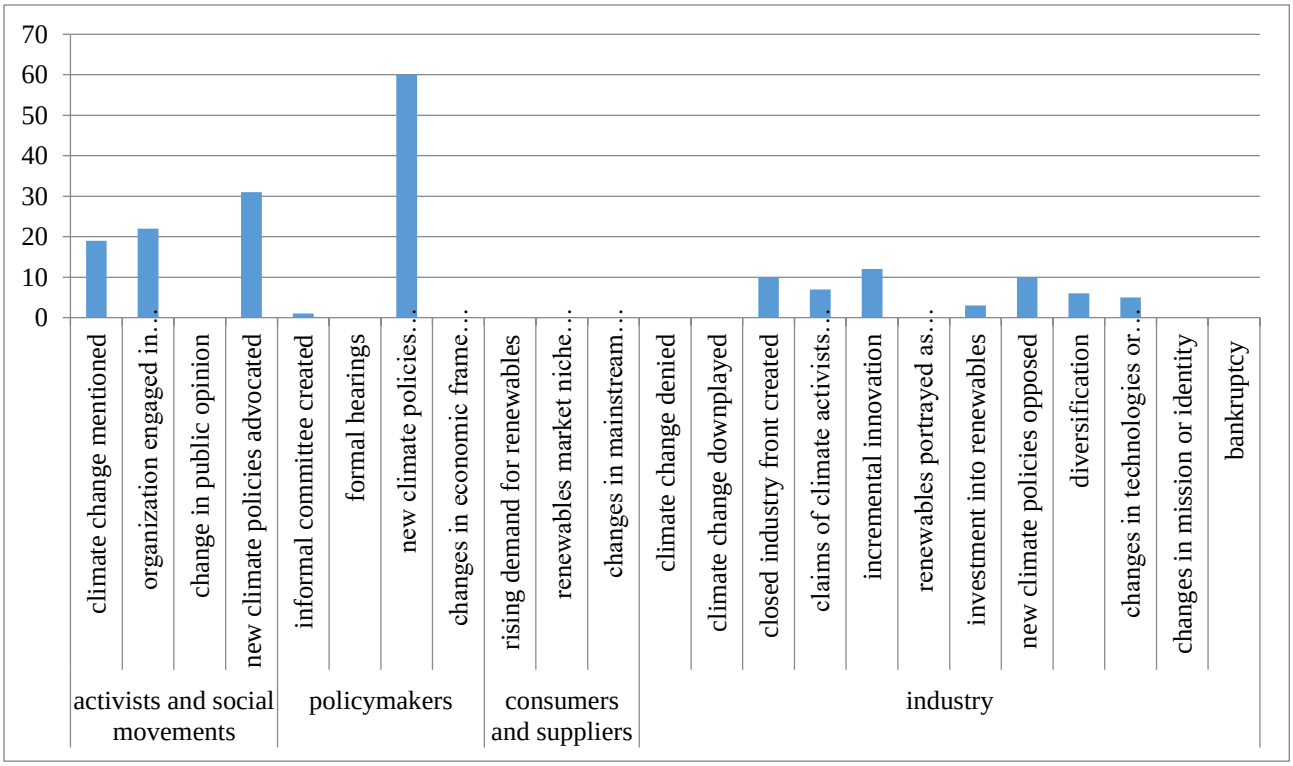

Figure 27. Results of deductive coding (2014–…).

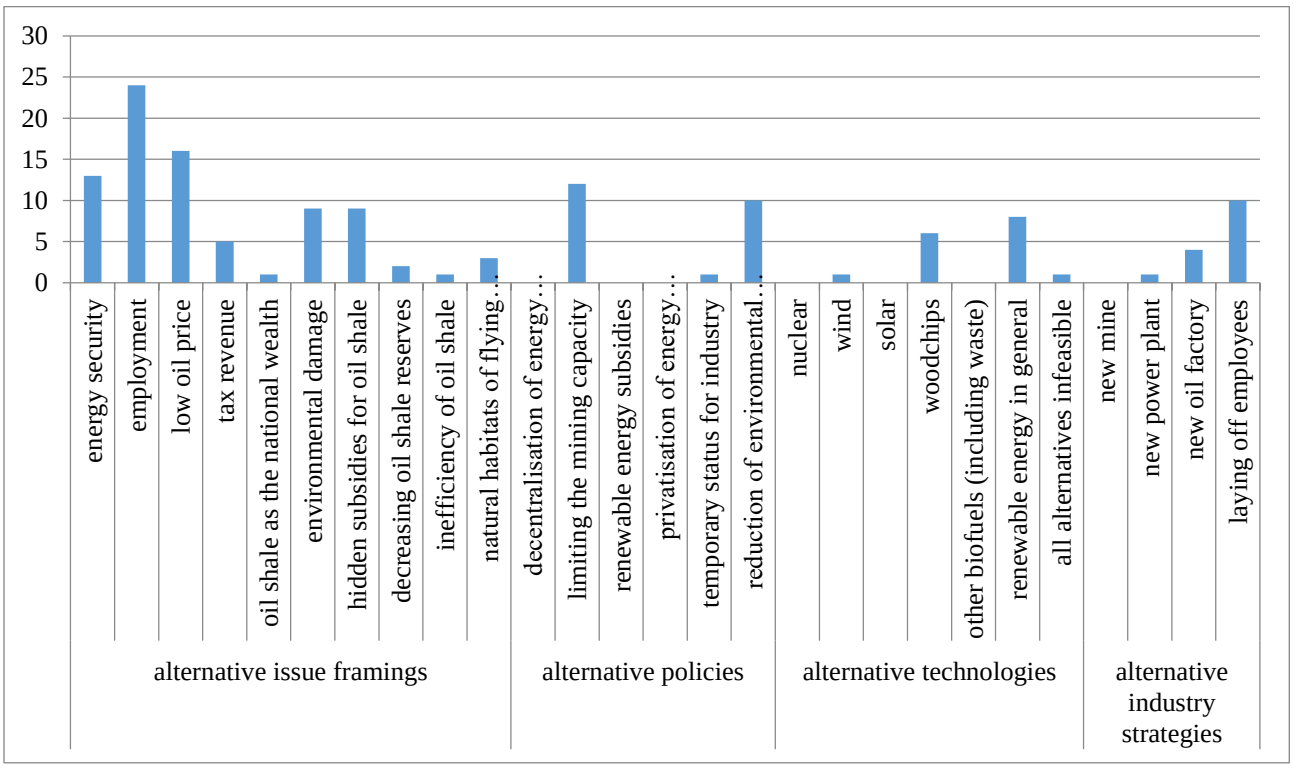

Figure 28. Results of inductive coding (2014–…).

Appendix D. List of online newspaper items

Date	Publisher	Headline	Reference
17.01.1996	Delfi	Energia püsib alanud aastal maailma keskpunktis	http://arileht.delfi.ee/news/uudised/energia-pusib-alanud-aastal-maailma-keskpunktis?id=50722797
13.05.1996	Postimees	Põlevkivist vangikong - kui kauaks?	http://www.postimees.ee/2476729/kas-odav-voi-kallis-onn-elekter-on-odav-kuid-kodutarbijaile-kallis-elektri-hinna-maarab-kodutarbija-maksuvoime-toostustarbijad-maitsevad-odava-elektri-roome-elektri-tootjad-on-dieedil-polevkivist-vangikong-kui-kauaks
11.06.1996	Delfi	Kiviter otsib investoreid	http://arileht.delfi.ee/news/uudised/kiviter-otsib-investoreid?id=50727402
24.07.1996	Postimees	Rajatav lõhkeainetehas vabastab Eesti Põlevkivi Venemaast sõltumisest	http://www.postimees.ee/2482111/rajatav-lohkeainetehas-vabastab-eesti-polevkivi-venemaast-soltumisest-pankrot-ei-ole-eesti-kutuse-arengu-ainus-variant-pseudoliberaalid-ning-pseudopatrioodid-millest-lahtuda-majanduspoliitika-kujundamisel-lihtsamalt-keerulisemale-suur-peeter-ja-vaik
10.08.1996	Postimees	Eesti Energia teeb venelastele nende põlevkivist elektrit	http://www.postimees.ee/2483605/eesti-energia-teeb-venelastele-nende-polevkivist-elektrit-ibm-lubas-et-ei-mangi-eesti-postiga-atlantat
21.08.1996	Postimees	Eesti Energia erastamise kava valmib novembri alguseks	http://www.postimees.ee/2484383/eesti-energia-erastamise-kava-valmib-novembri-alguseks-mottevahetus-kogub-poordeid-uuendus-peab-tostma-efektiivsust-hea-pangandustava-ei-luba-pankadel-erakondi-spondeerida-kohus-ei-kuulutanud-peeter-kilomanile-pankrotti-energia-saastmine-eeldab-mangu
29.08.1996	Delfi	Ida-Viru suurfirma ootab miljardit	http://arileht.delfi.ee/news/uudised/ida-viru-suurfirma-ootab-miljardit?id=50729946
31.08.1996	Delfi	Põlevkivi ei tohi unustada	http://arileht.delfi.ee/news/uudised/polevkivi-ei-tohi-unustada?id=50730018
05.09.1996	Postimees	Rock'n'roll ümber Eesti Energia	http://www.postimees.ee/2485709/rock-n-roll-umber-eesti-energia-arukas-leping-voi-maailma-rohelisim-amber-leping-on-kasulik-venemaale-kas-olnuks-muid-valikuid-nafta-hind-tousis-iraagi-sundmuste-tagajarjel-jarsult-suurim-voitja-on-saudi-araabia-venemaa-viinatoostusel-on-rasked-aj
19.09.1996	Postimees	Kiviter käivitab oktoobris elektritootmise, Probleemidega erastamine, Erastamisotsus paari kuu jooksul	http://www.postimees.ee/2486927/kiviter-kaivitab-oktoobris-elektritootmise-probleemidega-erastamine-erastamisotsus-paari-kuu-jooksul-riia-bors-uritab-areneda-toovaidluskomisjon-kiire-lahendus-konfliktile-komisjon-lahendab-toovaidluse-kiiresti-toovaidluskomisjoni-poordumine-on-ri
01.10.1996	Postimees	Säästetud kroon võrdub teenitud krooniga, Saastekahju hüvitised olid arvatust suuremad	http://www.postimees.ee/2487865/saastetud-kroon-vordub-teenitud-krooniga-saastekahju-huvitised-olid-arvatust-suuremad-puhtam-tootmine-parem-majapidamine-puhta-tootmise-keskus-jaab-eestisse-alles-laeva-soos-on-uus-tee-baeri-muuseum-on-ainulaadne

28.10.1996	Postimees	Kiviteri erastajaks valiti Infravest	http://www.postimees.ee/2493189/kiviteri-erastajaks-valiti-infravest-konkurendid-soovivad-joudu-mitte-onne-anti-kaiku-tartu-reoveepuhasti-esimene-jark-kantmeeter-vett-pudeli-koka-hinnaga-shveitslaste-abi-oli-mitmekulgne-gramophone-tutvustab-eesti-muusikat-reformierakond-kulutas
30.12.1996	Postimees	Viimased valged jõulud	http://arvamus.postimees.ee/2495679/viimased-valged-joulud-riiklus-ja-majandus-anno-domini-1996-kiri-toimetajale-uhe-kuunla-lugu-joulurahu-aegu-aaremaadel-ruumi-jatkub-dolby-stereoheli-uhest-kaotsilainud-kirjast-tanuavaldus?_ga=1.230046164.997560386.1466368422
13.01.1997	Delfi	Uus tehnoloogia Eesti energeetikasse	http://arileht.delfi.ee/news/uudised/uus-tehnoloogia-eesti-energeetikasse?id=50734852
17.01.1997	Postimees	Ameeriklaste elektriplaanil võib olla mitu varianti	http://www.postimees.ee/2497191/eesti-potentsiaal-lubaks-lahendused-leida-endal-ameeriklaste-elektriplaanil-voib-olla-mitu-varianti-rahutuste-korraldajaid-ahvardab-karistus-maaomanikud-ohustavad-kiirtee-projekti-eesti-jatkab-dialoogi-venemaaga-lati-raharoovel-moisteti-vangi-purjus
20.01.1997	Delfi	Pimeda kanana energiakuhja otsas	http://arileht.delfi.ee/news/uudised/pimeda-kanana-energiakuhja-otsas?id=50735081
03.02.1997	Delfi	Põlevkiviajastu võib veel koita	http://arileht.delfi.ee/news/uudised/polevkiviajastu-voib-veel-koita?id=50735631
03.02.1997	Delfi	Et põlevkivi langeks südamelt	http://arileht.delfi.ee/news/uudised/et-polevkivi-langeks-sudamelt?id=50735632
18.02.1997	Postimees	Kiviteri erastamine on takerdumas	http://www.postimees.ee/2499969/kiviteri-erastamine-on-takerdumas
19.02.1997	Delfi	Kiviteri erastajad kahtlevad	http://arileht.delfi.ee/news/uudised/kiviteri-erastajad-kahtlevad?id=50736238
27.02.1997	Delfi	Eesti varustab ennast elektriga ise	http://arileht.delfi.ee/news/uudised/eesti-varustab-ennast-elektriga-ise?id=50736462
04.03.1997	Postimees	Põlevkivitööstuse jäätmemäed on ohuks ka tulevastele põlvedele	http://www.postimees.ee/2501167/polevkivitoostuse-jaatmemaed-on-ohuks-ka-tulevastele-polvedele-jaatmeid-hiina-muuri-jagu-aheraine-ja-tuhavaljade-keskkonnaohtlikkus-on-vaike-keemiatoostuse-jaagid-on-ohtlikeimad-mida-teha-lahitulevikus-tuhamaed-jaavad
06.03.1997	Postimees	Kiviter läheb uuele erastamisringile, Erastamine selgitas tegelikku olukorda	http://www.postimees.ee/2501393/kiviter-laheb-uuele-erastamisringile-erastamine-selgitas-tegelikku-olukorda-leimann-pooldab-kiiret-loppmangu-kiviter-tuleb-muuta-huvitavaks
09.04.1997	Delfi	Miks Kiviter jäi erastamata	http://arileht.delfi.ee/news/uudised/miks-kiviter-jai-erastamata?id=50737853
09.04.1997	Delfi	Keskkonnatasudest ja muust	http://arileht.delfi.ee/news/uudised/keskkonnatasudest-ja-muust?id=50737855
01.07.1997	Postimees	Eesti elektri saatuseaasta	http://arvamus.postimees.ee/2512081/eesti-elektri-saatuseaasta?_ga=1.243537613.997560386.1466368422
01.07.1997	Postimees	1,1 miljardit dollarit elektrijaamadesse	http://www.postimees.ee/2512155/1-1-miljardit-dollarit-elektrijaamadesse
17.07.1997	Postimees	Mida tehakse põlevkivitootmise	http://www.postimees.ee/2511143/mida-tehakse-polevkivitootmise-umberkorraldamiseks

		ümberkorraldamiseks	
12.09.1997	Delfi	Energeetikas arengukava enne äriplaane	http://arileht.delfi.ee/news/uudised/energeetikas-arengukava-enne-ariplaane?id=50743838
21.10.1997	Postimees	Elekter ei lähe Eestis kunagi odavamaks	http://arvamus.postimees.ee/2523467/elekter-ei-lahe-eestis-kunagi-odavamaks?_ga=1.196448612.997560386.1466368422
30.10.1997	Postimees	Kiviteri ostab kütusefirma Eriõli	http://www.postimees.ee/2524667/kiviteri-ostab-kutusefirma-erioli
31.10.1997	Postimees	Valitsus kinnitas energeetika pikaajalise arengukava	http://www.postimees.ee/2524763/valitsus-kinnitas-energeetika-pikaajalise-arengukava
27.11.1997	Delfi	Kas toetate üleminekut tuumaenergiale?	http://arileht.delfi.ee/news/uudised/kas-toetate-uleminekut-tuumaenergiale?id=50748076
17.12.1997	Postimees	Tuumaenergiale üleminek võtaks 15 aastat	http://www.postimees.ee/2530281/tuumaenergiale-uleminek-votaks-15-aastat
02.03.1998	Postimees	Ida-Viru tulevik ei ole viletsus	http://www.postimees.ee/2537553/ida-viru-tulevik-ei-ole-viletsus
09.03.1998	Postimees	Visa hing NRG Energy on ikka veel Eestis	http://www.postimees.ee/2538133/visa-hing-nrg-energy-on-ikka-veel-eestis
13.03.1998	Postimees	Maagaasi osa kasvab	http://www.postimees.ee/2538461/maagaasi-osa-kasvab
29.03.1998	Postimees	Järvamaal hakatakse vee jõul elektrit tootma	http://www.postimees.ee/2539945/jarvamaal-hakatakse-vee-joul-elektrit-tootma
25.04.1998	Postimees	Eesti tahab oma põlevkivile Euroopa Liidus eritingimusi	http://www.postimees.ee/2542173/eesti-tahab-oma-polevkivile-euroopa-liidus-eritingimusi
25.05.1998	Postimees	Kiviter kavandab autokummide töötlemist	http://www.postimees.ee/2544683/kiviter-kavandab-autokummide-tootlemist
29.05.1998	Postimees	Põlevkiviraudtee tekitab pingeid	http://www.postimees.ee/2544989/polevkiviraudtee-tekitab-pingeid
30.06.1998	Postimees	Tuul hakkab raha teenima	http://www.postimees.ee/2547387/tuul-hakkab-raha-teenima
03.07.1998	Postimees	Mustade varblaste linn unistab autospordist	http://www.postimees.ee/2547729/mustade-varblaste-linn-unistab-autospordist
25.08.1998	Postimees	Ameeriklased, kas teie elekter ikka on odav?	http://www.postimees.ee/2552243/ameeriklased-kas-teie-elekter-ikka-on-odav
18.09.1998	Postimees	Keemiaettevõte Kiviter kavandab uut energiajaama	http://www.postimees.ee/2554445/keemiaettevote-kiviter-kavandab-uut-energiajaama
23.09.1998	Postimees	Eesti taasliitus maailma energianõukoguga	http://www.postimees.ee/2554901/eesti-taasliitus-maailma-energianoukoguga
03.10.1999	Delfi	Põlevkivienergeetikud kardavad keskkonnatasude	http://www.delfi.ee/archive/polevkivienergeetikud-kardavad-keskkonnatasude-kasvu?id=135627

		kasvu	
25.11.1999	Delfi	Narva elektrijaamad jäävad tänavu müümata	http://arileht.delfi.ee/news/uudised/narva-elektrijaamad-jaavad-tanavu-muumata?id=50779655
13.09.2000	Postimees	Ähvardav naftakriis	http://arvamus.postimees.ee/1830461/ahvardav-naftakriis?_ga=1.171782888.997560386.1466368422
29.09.2000	Postimees	Põlevkivi ei tasu uisapäisa kulutada	http://arvamus.postimees.ee/1831077/polevkivi-ei-tasu-uisapaisa-kulutada?_ga=1.171782888.997560386.1466368422
17.02.2000	Delfi	Õlitehas leevendab tööpuudust	http://arileht.delfi.ee/news/uudised/olitehas-leevendab-toopuudust?id=50783385
28.03.2000	Delfi	Eesti Roheline Liikumine soovitab karmistada keskkonnamakse	http://www.delfi.ee/news/paevauudised/eesti/eesti-roheline-liikumine-soovitab-karmistada-keskkonnamakse?id=279690
05.04.2000	Delfi	Kütteõli vanast autokummist	http://arileht.delfi.ee/archive/kutteoli-vanast-autokummist?id=299631
29.05.2000	Delfi	Standard & Poor's: ühine Balti energiaturg on põhjendatud	http://arileht.delfi.ee/news/uudised/standard-poors-uhine-balti-energiaturg-on-pohjendatud?id=426683
05.06.2000	Delfi	Eesti Põlevkivi toodangumaht suureneb 17 miljoni tonnini	http://arileht.delfi.ee/news/uudised/eesti-polevkivi-toodangumaht-suureneb-17-miljoni-tonnini?id=445606
21.06.2000	Delfi	Eesti rohelised süüdistavad valitsust raha raiskamises	http://www.delfi.ee/archive/eesti-rohelised-suudistavad-valitsust-raha-raiskamises?id=488819
08.09.2000	Delfi	Läbirääkimised Suncoriga jätkuvad peale probleemide lahendamist Austraalias	http://arileht.delfi.ee/news/uudised/labiraakimised-suncoriga-jatkuvad-peale-probleemide-lahendamist-austraalias?id=728952
08.10.2000	Delfi	Jõustub miljoni dollari suurune USA-Eesti põlevkiviuuringute koostööprojekt	http://arileht.delfi.ee/news/uudised/joustub-miljoni-dollari-suurune-usa-eesti-polevkiviuuringute-koostooprojekt?id=809675
24.11.2000	Delfi	Põlevkiviõlitootjaid kummitab pankrotioht	http://arileht.delfi.ee/archive/polevkiviolitootjaid-kummitab-pankrotioht?id=970534
14.12.2000	Postimees	Eesti Energia alustab rohelise elektri müüki	http://majandus24.postimees.ee/1841691/eesti-energia-alustab-rohelise-elektri-muuki?_ga=1.171782888.997560386.1466368422
21.03.2001	Delfi	Narva Elektrijaamade renoveerijaks pürib kolm firmat	http://arileht.delfi.ee/news/uudised/narva-elektrijaamade-renoveerijaks-purib-kolm-firmat?id=50872553
29.03.2001	Delfi	Elanikud on Ubja põlevkivikaevanduse rajamise vastu	http://arileht.delfi.ee/news/uudised/elanikud-on-ubja-polevkivikaevanduse-rajamise-vastu?id=50873729

29.03.2001	Delfi	Maavarade komisjon pooldab põlevkivikaevanduse rajamist Ubjas	http://arileht.delfi.ee/news/uudised/maavarade-komisjon-pooldab-polevkivikaevanduse-rajamist-ubjas?id=50873961
19.04.2001	Postimees	Ida-Virumaa jääb ilma 2,5 miljardilisest põlevkivitehasest	http://majandus24.postimees.ee/1862719/ida-virumaa-jaab-ilma-2-5-miljardilisest-polevkivitehasest?_ga=1.202022617.997560386.1466368422
02.05.2001	Postimees	Eesti soovib Euroopa Liidult põlevkivile eristaatust	http://majandus24.postimees.ee/1865061/luhidalt?_ga=1.202022617.997560386.1466368422
07.05.2001	Postimees	Riskid elektrijaamade erastamisel	http://arvamus.postimees.ee/1865697/riskid-elektrijaamade-erastamisel?_ga=1.202022617.997560386.1466368422
30.05.2001	Postimees	Analüüs: Kaunis ja kaugelt looduslähedane Eesti	http://arvamus.postimees.ee/1870315/analuus-kaunis-ja-kaugelt-looduslahedane-eesti?_ga=1.176045674.997560386.1466368422
07.06.2001	Postimees	Eesti Energia kavandab Paljassaarde kahte tuulikut	http://www.postimees.ee/1872007/eesti-energia-kavandab-paljassaarde-kahte-tuulikut
13.06.2001	Delfi	Viru Keemia pressib Hollandi kummid õliks	http://arileht.delfi.ee/news/uudised/viru-keemia-pressib-hollandi-kummid-oliks?id=50804966
14.06.2001	Postimees	NRG-tehing võib lõppeda energiakriisiga	http://majandus24.postimees.ee/1873439/nrg-tehing-voib-loppeda-energiakriisiga?_ga=1.234691158.997560386.1466368422
14.06.2001	Postimees	Akadeemikute avaldusest	http://arvamus.postimees.ee/1873665/kirjad?_ga=1.234691158.997560386.1466368422
17.06.2001	Postimees	Eesti taotleb euroliidult põlevkivile eristaatust	http://majandus24.postimees.ee/1874079/eesti-taotleb-euroliidult-polevkivile-eristaatust?_ga=1.234691158.997560386.1466368422
27.06.2001	Delfi	Keskkonnakaitsjad nõuavad elektrijaamade müügi peatamist	http://arileht.delfi.ee/news/uudised/keskkonnakaitsjad-nouavad-elektrijaamade-muugi-peatamist?id=50887075
27.06.2001	Postimees	Ühisavaldus seoses Narva Elektrijaamade erastamisega	http://arvamus.postimees.ee/1876835/kirjad?_ga=1.243626701.997560386.1466368422
28.06.2001	Postimees	Valitsus müüb jõujaamad rahva survest hoolimata	http://www.postimees.ee/1876057/valitsus-muub-joujaamad-rahva-survest-hoolimata
05.07.2001	Postimees	Opositsioon ei suutnud NRG-tehingut peatada	http://www.postimees.ee/1877483/opositsioon-ei-suutnud-nrg-tehingut-peatada
25.07.2001	Postimees	Kasvuhooneefekt tapab	http://arvamus.postimees.ee/1881011/kasvuhooneefekt-tapab?_ga=1.231551447.997560386.1466368422
21.08.2001	Delfi	Õiguskantsler soovitab kaaluda elektrijaamade erastamise peatamist	http://www.postimees.ee/1885785/oiguskantsler-soovitab-kaaluda-elektrijaamade-erastamise-peatamist
22.08.2001	Delfi	Valitsus ei peata elektrijaamade müüki	http://www.delfi.ee/news/paevauudised/eesti/valitsus-ei-peata-elektrijaamade-muuki?id=1946462

23.08.2001	Delfi	Gunnar Okk hakkas NRG-tehingu pooldajaks	http://arileht.delfi.ee/news/uudised/gunnar-okk-hakkas-nrg-tehingu-pooldajaks?id=50893119
23.08.2001	Delfi	Mart Laari poliitiline avaldus NRG istungil	http://arileht.delfi.ee/news/uudised/mart-laari-poliitiline-avaldus-nrg-istungil?id=50893209
23.08.2001	Delfi	EE selgitas rohelistele elektrijaamade müügi kasulikkust	http://arileht.delfi.ee/news/uudised/ee-selgitas-rohelistele-elektrijaamade-muugi-kasulikkust?id=50893223
24.08.2001	Postimees	Kas nii võib käituda peaminister?	http://arvamus.postimees.ee/1886385/kirjad?_ga=1.201676249.997560386.1466368422
27.08.2001	Delfi	Narva Elektrijaamade keskkonnaauditi tulemusi näeb internetis	http://arileht.delfi.ee/news/uudised/narva-elektrijaamade-keskkonnaauditi-tulemusi-naeb-internetis?id=50893494
28.08.2001	Delfi	Rohelised usuvad põlevkivienergeetika alternatiividesse	http://arileht.delfi.ee/news/uudised/rohelised-usuvad-polevkivienergeetika-alternatiividesse?id=50893595
29.08.2001	Postimees	Põlevkivi elektrijaamade varjus	http://arvamus.postimees.ee/1887469/polevkivi-elektrijaamade-varjus?_ga=1.201676249.997560386.1466368422
03.09.2001	Postimees	Särisev diskussioon rohelise leegi üle	http://arvamus.postimees.ee/1888093/sarisev-diskussioon-rohelise-leegi-ule?_ga=1.201676249.997560386.1466368422
10.09.2001	Postimees	Rohelisest energiast	http://arvamus.postimees.ee/1889909/kirjad?_ga=1.163805687.997560386.1466368422
18.09.2001	Postimees	Euroliit vähendab põlevkivi osa Eestis	http://maailm.postimees.ee/1892043/euroliit-vahendab-polevkivi-osa-eestis?_ga=1.163805687.997560386.1466368422
28.09.2001	Postimees	Eesti Energia kaotas vara väärtusest neljandiku	http://majandus24.postimees.ee/1893947/eesti-energia-kaotas-vara-vaartusest-neljandiku?_ga=1.138680955.997560386.1466368422
26.10.2001	Postimees	Kuidas edenevad liitumiskõnelused	http://arvamus.postimees.ee/1899763/kuidas-edenevad-liitumiskonelused?_ga=1.138680955.997560386.1466368422
06.11.2001	Postimees	Saastetasud tõusevad järgmisel aastal keskmiselt viiendiku	http://www.postimees.ee/1901885/saastetasud-tousevad-jargmisel-aastal-keskmiselt-viiendiku
09.11.2001	Postimees	Põlevkivijäätmed on Eestis suurimad looduse mürgitajad	http://www.postimees.ee/1902815/polevkivijaatmed-on-eestis-suurimad-looduse-murgitajad
11.11.2001	Postimees	Mida tähendab põlevkivi eristaatus?	http://arvamus.postimees.ee/1902897/mida-tahendab-polevkivi-eristaatus?_ga=1.196304484.997560386.1466368422
06.12.2001	Postimees	Riigid sõltuvad aina enam oma energiast	http://maailm.postimees.ee/1908225/riigid-soltuvad-aina-enam-oma-energiast?_ga=1.204756696.997560386.1466368422
20.12.2001	Delfi	Rohelised on loobunud	http://arileht.delfi.ee/news/uudised/rohelised-on-loobunud-vaidlustamast-elektrijaamade-

		vaidlustamast elektrijaamade põhimõttelist müüki	pohimottelist-muuki?id=50904981
27.12.2001	Delfi	USA saadik: NATO ja NRG-tehing pole seotud	http://arileht.delfi.ee/news/uudised/usa-saadik-nato-ja-nrg-tehing-pole-seotud?id=50905298
07.01.2002	Postimees	Avalik kiri Eesti Vabariigi peaministrile	http://arvamus.postimees.ee/1912929/kirjad?_ga=1.134959801.997560386.1466368422
08.01.2002	Postimees	Eesti loobub Narva Elektrijaamade erastamise tehingust NRGga	http://www.postimees.ee/1912995/eesti-loobub-narva-elektrijaamade-erastamise-tehingust-nrgga
09.01.2002	Postimees	Energiasüsteem saab NRG-ta arenguvõimaluse	http://majandus24.postimees.ee/1913233/energiasusteem-saab-nrg-ta-arenguvoimaluse?_ga=1.129146564.997560386.1466368422
24.01.2002	Postimees	Põlevkivienergeetika otsib NRG lahkumise järel uut suunda	http://majandus24.postimees.ee/1916217/polevkivienergeetika-otsib-nrg-lahkumise-jarel-uut-suunda?_ga=1.129146564.997560386.1466368422
25.01.2002	Postimees	Nädalakommentaar: Tuuma- või tuuleenergia?	http://majandus24.postimees.ee/1916681/nadalakommentaar-tuuma-voi-tuuleenergia?_ga=1.243029578.997560386.1466368422
20.02.2002	Postimees	Tuumarenessanss tulekul	http://maailm.postimees.ee/1922237/tuumarenessanss-tulekul?_ga=1.243029578.997560386.1466368422
27.02.2002	Postimees	Presidendi pöördumine Riigikogu poole	http://www.postimees.ee/1923821/presidendi-poordumine-riigikogu-poole
14.03.2002	Postimees	Energiadefitsiit algab aastal 2007	http://arvamus.postimees.ee/1926935/kirjad?_ga=1.200433126.997560386.1466368422
19.03.2002	Postimees	Analüüs: Narva jaamade katlad töötaksid veel kümme aastat	http://arvamus.postimees.ee/1927863/analuus-narva-jaamade-katlad-tootaksid-veel-kumme-aastat?_ga=1.163290868.997560386.1466368422
15.04.2002	Postimees	Põlevkivienergeetika kaitseks	http://arvamus.postimees.ee/1933299/polevkivienergeetika-kaitseks?_ga=1.234165846.997560386.1466368422
18.04.2002	Postimees	Tuumajaama rajamine Eestisse võib olla paratamatu	http://www.postimees.ee/1933947/tuumajaama-rajamine-eestisse-voib-olla-paratamatu
18.04.2002	Delfi	Tuumajaam tuleb Eestisse niikuinii	http://arileht.delfi.ee/archive/tuumajaam-tuleb-eestisse-niikuinii?id=3473995
24.04.2002	Postimees	Põlevkivi on omadele võõras	http://arvamus.postimees.ee/1935137/polevkivi-on-omadele-vooras?_ga=1.234165846.997560386.1466368422
10.06.2002	Postimees	Streimann: kas Eesti oskab euroabiraha ära kasutada?	http://www.postimees.ee/1945157/streimann-kas-eesti-oskab-euroabiraha-ara-kasutada
09.07.2002	Delfi	EE emiteerib 3,13 miljardi eest võlakirju	http://arileht.delfi.ee/news/uudised/ee-emiteerib-3-13-miljardi-eest-volakirju?id=3922051

01.08.2002	Postimees	Eesti tuulikud talupõllul	http://arvamus.postimees.ee/1955277/eesti-tuulikud-talupollul?_ga=1.202004185.997560386.1466368422
06.09.2002	Postimees	Viru Keemia Grupp katsetab Kanadas uut tehnoloogiat	http://majandus24.postimees.ee/1963105/viru-keemia-grupp-katsetab-kanadas-uut-tehnoloogiat?_ga=1.162812404.997560386.1466368422
26.09.2002	Postimees	Viru Keemia Grupp arendab uut õlitootmise tehnoloogiat	http://majandus24.postimees.ee/1967587/viru-keemia-grupp-arendab-uut-olitootmise-tehnoloogiat?_ga=1.162812404.997560386.1466368422
18.10.2002	Postimees	Eesti saavutas uue üleminekuperioodi keskkonnapeatükis	http://www.postimees.ee/1973161/eesti-saavutas-uue-uleminekuperioodi-keskkonnapeatukis
05.11.2002	Postimees	Valmis Narva Elektrijaamade renoveerimise keskkonnamõju hinnangu lõpparuanne	http://majandus24.postimees.ee/1977379/valmis-narva-elektrijaamade-renoveerimise-keskkonnamoju-hinnangu-lopparuanne?_ga=1.162798068.997560386.1466368422
17.11.2002	Postimees	Peidetud energia põlevkivis	http://arvamus.postimees.ee/1980187/peidetud-energia-polevkivis?_ga=1.162798068.997560386.1466368422
15.01.2003	Postimees	Kommentaar: Kallis põlevkivielekter	http://majandus24.postimees.ee/1992985/kommentaar-kallis-polevkivielekter?_ga=1.234117462.997560386.1466368422
21.01.2003	Delfi	Merko Kaevandused sai oma põlevkivikarjääri	http://arileht.delfi.ee/news/uudised/merko-kaevandused-sai-oma-polevkivikarjaari?id=4990228
23.01.2003	Postimees	Kaevurid lubasid võidelda Merkole kaeveloa andmise vastu	http://majandus24.postimees.ee/1994749/kaevurid-lubasid-voidelda-merkole-kaeveloa-andmise-vastu?_ga=1.231084759.997560386.1466368422
24.01.2003	Postimees	Nädalakommentaar: Kullajaht Virumaal	http://majandus24.postimees.ee/1995129/nadalakommentaar-kullajaht-virumaal?_ga=1.267670726.997560386.1466368422
23.03.2003	Delfi	Merko plaanib odavalt põlevkivi kaevandada	http://arileht.delfi.ee/news/uudised/merko-plaanib-odavalt-polevkivi-kaevandada?id=50944845
24.03.2003	Postimees	Tuumakas elekter	http://arvamus.postimees.ee/2008149/tuumakas-elekter?_ga=1.209868125.997560386.1466368422
26.03.2003	Postimees	Kommentaar: Tuumakast mõttest	http://majandus24.postimees.ee/2008777/kommentaar-tuumakast-mottest?_ga=1.209868125.997560386.1466368422
28.03.2003	Postimees	Nädalakommentaar: Energiliselt särav idee	http://majandus24.postimees.ee/2009417/nadalakommentaar-energiliselt-sarav-idee?_ga=1.209868125.997560386.1466368422
03.04.2003	Postimees	Keskkonnakaitsjad on uue koalitsioonilepinguga rahul	http://maailm.postimees.ee/2010741/keskkonnakaitsjad-on-uue-koalitsioonilepinguga-rahul?_ga=1.240007883.997560386.1466368422
03.04.2003	Postimees	Euroliit võib toetada Eesti elektritarbijat	http://majandus24.postimees.ee/2010891/euroliit-voib-toetada-eesti-elektritarbijat?_ga=1.240007883.997560386.1466368422

08.04.2003	Postimees	Eesti loodab vähendada kasvuhoonegaaside heitkoguseid veel viiendiku võrra	http://majandus24.postimees.ee/2011989/eesti-loodab-vahendada-kasvuhoonegaaside-heitkoguseid-veel-viiendiku-vorra?_ga=1.240007883.997560386.1466368422
27.05.2003	Postimees	Eesti Energia vähendab saastet	http://www.postimees.ee/2023873/eesti-energia-vahendab-saastet
04.06.2003	Postimees	Eesti ühines võitlusega väävli heitkoguste vähendamise eest	http://www.postimees.ee/2025877/eesti-uhines-voitlusega-vaavli-heitkoguste-vahendamise-eest
08.06.2003	Postimees	Kukruse tuhamägi peidab endas gaasist tulekollet	http://www.postimees.ee/2026849/kukruse-tuhamagi-peidab-endas-gaasist-tulekollet
10.07.2003	Delfi	Viru Keemia Grupp kavandab allmaakaevandust	http://arileht.delfi.ee/news/uudised/viru-keemia-grupp-kavandab-allmaakaevandust?id=50959077
16.07.2003	Delfi	Eesti Energia valmistab ette Ahtme elektrijaama uuendamist	http://arileht.delfi.ee/news/uudised/eesti-energia-valmistab-ette-ahtme-elektrijaama-uuendamist?id=50959505
16.07.2003	Postimees	Eesti Energia viib Ahtme elektrijaama biokütusele	http://majandus24.postimees.ee/2035143/eesti-energia-viib-ahtme-elektrijaama-biokutusele?_ga=1.210517469.997560386.1466368422
23.07.2003	Postimees	Null-käibemaks "rohelisele" energiale kaob	http://maailm.postimees.ee/2036695/null-kibemaks-rohelisele-energiale-kaob?_ga=1.210517469.997560386.1466368422
24.09.2003	Postimees	Keskkonnakaitsjad nõuavad Merko kaeveloa tühistamist	http://www.postimees.ee/1374325/luhidalt
29.10.2003	Postimees	Euroliit tõstab hüppeliselt energiamakse	http://www.postimees.ee/1381003/euroliit-tostab-huppeliselt-energiamakse
06.11.2003	Postimees	Hüdroelekter tuleb jõgedest laelampi teosammul	http://www.postimees.ee/1382347/hudroelekter-tuleb-jogedest-laelampi-teosammul
14.11.2003	Postimees	Miljardikatlad alustavad Narvas põlevkivist elektri tootmist	http://www.postimees.ee/1383899/miljardikatlad-alustavad-narvas-polevkivist-elektri-tootmist
29.11.2003	Delfi	Sillamäe soojuselektrijaam saab 56 miljoni krooni eest moodsa generaatori	http://arileht.delfi.ee/news/uudised/sillamae-soojuselektrijaam-saab-56-miljoni-krooni-eest-moodsa-generaatori?id=50970509
05.12.2003	Postimees	Eesti püüab tõrjuda konkurente elektriturult	http://www.postimees.ee/1387599/eesti-puuab-torjuda-konkurente-elektriturult
09.12.2003	Postimees	Põlevkivikeemia ründab uue vaiguga välisturge	http://www.postimees.ee/1388241/polevkivikeemia-rundab-uue-vaiguga-valisturge
15.01.2004	Delfi	Kaevandus sai 10-miljonilise katlamaja	http://arileht.delfi.ee/news/uudised/kaevandus-sai-10-miljonilise-katlamaja?id=7023939

22.01.2004	Postimees	Eesti energeetika vajab investeeringuid	http://www.postimees.ee/1394623/eesti-energeetika-vajab-investeeringuid
24.01.2004	Postimees	Nädalakommentaar: Energeetiline kiirtee	http://www.postimees.ee/1395119/nadalakommentaar-energeetiline-kiirtee
02.02.2004	Postimees	Miks põlevkivielekter?	http://www.postimees.ee/1396391/miks-polevkivielekter
11.02.2004	Postimees	Nädalakommentaar: Pea liiva all	http://www.postimees.ee/1398005/nadalakommentaar-pea-liiva-all
19.02.2004	Postimees	Eesti Energia loobus tuumajaama rajamisest	http://www.postimees.ee/1399405/eesti-energia-loobus-tuumajaama-rajamisest
03.03.2004	Postimees	Eesti Energia: kogu hinnatõus investeeritakse	http://www.postimees.ee/1401329/eesti-energia-kogu-hinnatous-investeeritakse
10.03.2004	Postimees	Vajame taastuvenergiat	http://www.postimees.ee/1402643/kirjad
21.04.2004	Delfi	Merko alustab järgmise aasta lõpus põlevkivi kaevandamist	http://arileht.delfi.ee/news/uudised/merko-alustab-jargmise-aasta-lopus-polevkivi-kaevandamist?id=50982015
17.07.2004	Postimees	Ministeerium sai rohelistelt kliimaohustaja auhinna	http://www.postimees.ee/1424039/ministeerium-sai-rohelistelt-kliimaohustaja-auhinna
24.08.2004	Postimees	Keskkonnasaaste maksab kinni tarbija	http://www.postimees.ee/1429825/keskkonnasaaste-maksab-kinni-tarbija
26.08.2004	Postimees	Ida-Virumaal ei ole enam Kohtla jõge	http://www.postimees.ee/1430329/ida-virumaal-ei-ole-enam-kohtla-joge
01.09.2004	Postimees	Eesti Energia avas säästuportaali	http://www.postimees.ee/1431369/eesti-energia-avas-saastuportaali
01.09.2004	Postimees	Villu Reiljan õhutab rohelist maksureformi	http://www.postimees.ee/1431321/villu-reiljan-ohutab-rohelist-maksureformi
02.09.2004	Postimees	Häda, kui valitsema jäävad nanokodanlased!	http://arileht.delfi.ee/archive/hada-kui-valitsema-jaavad-nanokodanlased?id=8516836
08.09.2004	Delfi	Eesti Põlevkivi laiendab kaevandamist	http://arileht.delfi.ee/news/uudised/eesti-polevkivi-laiendab-kaevandamist?id=8566164
29.01.2005	Delfi	Inimene mängib ilmaga kontrollimatut mängu	http://www.postimees.ee/1457223/inimene-mangib-ilmaga-kontrollimatut-mangu
04.03.2005	Postimees	Alustab Põlevkivimaa 2005	http://arileht.delfi.ee/news/uudised/alustab-polevkivimaa-2005?id=51047800
18.04.2005	Delfi	Isamaaliit — kindla programmiga erakond	http://www.delfi.ee/archive/isamaaliit-kindla-programmiga-erakond?id=10197888
26.04.2005	Delfi	Gunnar Okk soovitab puukütet elektri asemel	http://www.postimees.ee/1472115/gunnar-okk-soovitab-puukutet-elektri-asemel
27.04.2005	Postimees	Ökomaks pole uus asi	http://www.postimees.ee/1472317/okomaks-pole-uus-asi

27.04.2005	Postimees	Narva elektrijaamad vajavad veel üle 10 miljardi krooni	http://www.postimees.ee/1472447/narva-elektrijaamad-vajavad-veel-ule-10-miljardi-krooni
28.04.2005	Postimees	Kommentaar: Eesti vajab tuumajaama	http://www.postimees.ee/1472599/kommentaar-eesti-vajab-tuumajaama
29.04.2005	Postimees	Soojatootjad elavad rohelise energia ootuses	http://www.postimees.ee/1472853/soojatootjad-elavad-rohelise-energia-ootuses
13.05.2005	Postimees	Külaelanikud protestivad kaevanduste vastu	http://www.postimees.ee/1475595/kulaelanikud-protestivad-kaevanduste-vastu
16.06.2005	Delfi	Mitu erafirmat soovib põlevkivi kaevandada	http://arileht.delfi.ee/news/uudised/mitu-erafirmat-soovib-polevkivi-kaevandada?id=51013157
26.05.2005	Postimees	Põlevkivi elektrijaamadelt võivad korstnad kaduda	http://www.postimees.ee/1478075/polevkivi-elektrijaamadelt-voivad-korstnad-kaduda
09.06.2005	Postimees	Vene gaasikaru hirmutab	http://www.postimees.ee/1480777/vene-gaasikaru-hirmutab
17.06.2005	Postimees	Suletud kaevanduse juures põleb põlevkivi	http://www.postimees.ee/1482455/suletud-kaevanduse-juures-poleb-polevkivi
26.06.2005	Delfi	Töörühm on nõus keskkonnatasu tõstmisega	http://arileht.delfi.ee/news/uudised/tooruhm-on-nous-keskkonnatasu-tostmisega?id=51015706
11.07.2005	Postimees	Juhtkiri: Paratamatu põlevkivi	http://www.postimees.ee/1485939/juhtkiri-paratamatu-polevkivi
11.07.2005	Postimees	Elektri hind tõuseb kümne aasta jooksul vähemalt poole võrra	http://www.postimees.ee/1485897/elektri-hind-touseb-kumne-aasta-jooksul-vahemalt-poole-vorra
11.07.2005	Postimees	Torm keskkonnatasude veeklaasis	http://www.postimees.ee/1485937/torm-keskkonnatasude-veeklaasis
16.07.2005	Postimees	Euroliit võib Eesti pisimatki tegematajätmist trahvida	http://www.postimees.ee/1486957/euroliit-voib-eesti-pisimatki-tegematajatmist-trahvida
27.07.2005	Postimees	Okk: energiasõda on hullem kui hinnatõus	http://www.postimees.ee/1488857/okk-energiasoda-on-hullem-kui-hinnatous
09.08.2005	Postimees	Akadeemik Lippmaa otsib uue aastatuhande energiat	http://www.postimees.ee/1491181/akadeemik-lippmaa-otsib-uue-aastatuhande-energiat
10.08.2005	Delfi	Eesti Energia investeeris majandusaasta esimese kolme kuuga üle 500 miljoni krooni	http://arileht.delfi.ee/news/uudised/eesti-energia-investeeris-majandusaasta-esimese-kolme-kuuga-ule-500-miljoni-krooni?id=51048869
15.08.2005	Postimees	Energeetika tulevik nõuab alternatiive	http://www.postimees.ee/1492187/energeetika-tulevik-nouab-alternatiive
26.08.2005	Postimees	Energiaga läheb asi täbaramaks	http://www.postimees.ee/1494119/energiaga-laheb-asi-tabaramaks
20.09.2005	Postimees	Kaevanduste vastased	http://www.postimees.ee/1498745/kaevanduste-vastased-murdsid-toompeale

		murdsid Toompeale	
11.10.2005	Delfi	Enne uus plaan, siis alles uus juht	
			http://arileht.delfi.ee/news/uudised/enne-uus-plaan-siis-alles-uus-juht?id=51021210
12.10.2005	Delfi	Kullapalavik paneb põlevkiviõli tootjad tehaseid ehitama	http://arileht.delfi.ee/news/uudised/kullapalavik-paneb-polevkivioli-tootjad-tehaseid-ehitama?id=51049378
20.10.2005	Delfi	Kaevandus ähvardab Ida-Virumaa kaitseala	http://arileht.delfi.ee/news/uudised/kaevandus-ahvardab-ida-virumaa-kaitseala?id=11433430
08.11.2005	Postimees	Eesti Energia kulutab miljardi põlevkivituhale	http://www.postimees.ee/1508363/eesti-energia-kulutab-miljardi-polevkivituhale
16.11.2005	Delfi	Sandor Liive: elektri hind võib tõusta, tuumaelektrijaama ei tule	http://arileht.delfi.ee/news/uudised/sandor-liive-elektri-hind-voib-tousta-tuumaelektrijaama-ei-tule?id=51049635
23.11.2005	Postimees	Eesti ehitab veel ühe põlevkiviõli tehase	http://www.postimees.ee/1511393/eesti-ehitab-veel-uhe-polevkivioli-tehase
01.12.2005	Postimees	Härra Eesti Energia lahkus haruldase kaevurikirkaga	http://www.postimees.ee/1513115/harra-eesti-energia-lahkus-haruldase-kaevurikirkaga
05.12.2005	Postimees	Euroopa ootab Eesti mahepõllunduse kasvu	http://www.postimees.ee/1513787/euroopa-ootab-eesti-mahepollunduse-kasvu
07.12.2005	Delfi	Eesti ees seisab valik, kas panustada Soome või Leedu tuumaenergeetikasse	http://arileht.delfi.ee/news/uudised/eesti-ees-seisab-valik-kas-panustada-soome-voi-leedu-tuumaenergeetikasse?id=51049804
20.12.2005	Postimees	Keskkonnakaitsjad nõuavad üle kahe korra kallimat elektrit	http://www.postimees.ee/1516763/keskkonnakaitsjad-nouavad-ule-kahe-korra-kallimat-elektrit
28.12.2005	Postimees	Rohelised surusid riigile peale tuuleelektrienergia	http://www.postimees.ee/1517749/rohelised-surusid-riigile-peale-tuuleelektrienergia
28.12.2005	Postimees	Juhtkiri: Elekter muutuste lävel	http://www.postimees.ee/1517715/juhtkiri-elekter-muutuste-lavel
30.12.2005	Postimees	Eesti Energia sai keskkonnaauhinna	http://www.postimees.ee/1518169/eesti-energia-sai-keskkonnaauhinna
10.02.2006	Postimees	Uute põlevkivikaevanduste rajamine jääb ajutiselt seisma	http://www.postimees.ee/1526719/uute-polevkivikaevanduste-rajamine-jaab-ajutiselt-seisma
02.03.2006	Postimees	Tuumajaam tõrjub põlevkivi tagaplaanile	http://www.postimees.ee/1530835/tuumajaam-torjub-polevkivi-tagaplaanile
07.03.2006	Postimees	Lippmaa: mõelgem tuumaenergiale, kui põlevkivi	http://www.postimees.ee/1531713/lippmaa-moelgem-tuumaenergiale-kui-polevkivi-lopeb

		lõpeb	
13.03.2006	Delfi	Rainer Nõlvak: Roheline Energiakava 2020	http://www.delfi.ee/archive/rainer-nolvak-roheline-energiakava-2020?id=12431864
14.03.2006	Postimees	Balti koostöö energiavallas on hädavajalik	http://arvamus.postimees.ee/1533123/balti-koostoo-energiavallas-on-hadavajalik?_ga=1.130758983.997560386.1466368422
14.03.2006	Postimees	Tuumaenergia on umbtee	http://arvamus.postimees.ee/1533121/tuumaenergia-on-umbtee?_ga=1.130758983.997560386.1466368422
11.04.2006	Delfi	Opositsioon algatas energeetika arutelu	http://arileht.delfi.ee/news/uudised/opositsioon-algatas-energeetika-arutelu?id=51036301
29.05.2006	Delfi	Isamaaliidu ja Res Publica ühisprogramm	http://www.delfi.ee/news/paevauudised/eesti/isamaaliidu-ja-res-publica-uhisprogramm?id=13028236
07.06.2006	Postimees	Avalik kiri nõuab põlevkivi arengukavale avalikku arutelu	http://www.postimees.ee/1552281/avalik-kiri-nouab-polevkivi-arengukavale-avalikku-arutelu
08.06.2006	Delfi	Sotsid süüdistavad valitsust põlevkiviga salatsemises	http://arileht.delfi.ee/news/uudised/sotsid-suudistavad-valitsust-polevkiviga-salatsemises?id=51041410
13.07.2006	Postimees	Valitsus ei toetanud opositsiooni eelnõusid	http://www.postimees.ee/1560941/valitsus-ei-toetanud-opositsiooni-eelnousid
13.07.2006	Postimees	Estonia kaevandus kui põrgu eeskoda	http://majandus24.postimees.ee/1560823/estonia-kaevandus-kui-porgu-eeskoda?_ga=1.239754955.997560386.1466368422
01.08.2006	Delfi	Vallad võitlevad ühiselt põlevkivi kaevandamise vastu	http://arileht.delfi.ee/news/uudised/vallad-voitlevad-uhiselt-polevkivi-kaevandamise-vastu?id=51045895
09.08.2006	Delfi	Põlevkivi ainus alternatiiv oleks tuumaenergia	http://arileht.delfi.ee/news/uudised/polevkivi-ainus-alternatiiv-oleks-tuumaenergia?id=51051930
25.08.2006	Delfi	Vallarahvas sõdib kaevandustele vastu	http://www.delfi.ee/news/paevauudised/eesti/vallarahvas-sodib-kaevandustele-vastu?id=13667618
25.08.2006	Postimees	Vallarahvas seisab vastu uutele kaevandustele	http://www.postimees.ee/1571633/vallarahvas-seisab-vastu-uutele-kaevandustele
25.08.2006	Delfi	Repliik: Põlevkivisõda?	http://arvamus.postimees.ee/1571557/repliik-polevkivisoda?_ga=1.201160294.997560386.1466368422
08.09.2006	Postimees	Esmaspäeval toimub teine ümarlaud põlevkivi teemadel	http://arileht.delfi.ee/news/uudised/esmaspaeval-toimub-teine-umarlaud-polevkivi-teemadel?id=51055558
23.09.2006	Postimees	Pöördumine Eesti avalikkuse, Põhjamaade avalikkuse, EV valitsuse, riigikogu poole	http://majandus24.postimees.ee/1580783/poordumine-eesti-avalikkuse-pohjamaade-avalikkuse-ev-valitsuse-riigikogu-poole?_ga=1.201160294.997560386.1466368422
28.09.2006	Postimees	Eesti Põlevkivi killustik sihib Saksamaa ostjaid	http://majandus24.postimees.ee/1582383/eesti-polevkivi-killustik-sihib-saksamaa-ostjaid?_ga=1.201160294.997560386.1466368422

30.09.2006	Postimees	Peeter Laurits: Ärge laastage Eestit Nauru kombel!	http://kultuur.postimees.ee/1583115/peeter-laurits-arge-laastage-eestit-nauru-kombel?_ga=1.243087690.997560386.1466368422
18.10.2006	Postimees	Mart Laar: Parem kui varem	http://arvamus.postimees.ee/1589215/mart-laar-parem-kui-varem?_ga=1.167457270.997560386.1466368422
20.10.2006	Postimees	Eesti Energia plaanib Jordaaniasse tehast	http://majandus24.postimees.ee/1590073/eesti-energia-plaanib-jordaaniasse-tehast?_ga=1.168063593.997560386.1466368422
25.10.2006	Delfi	Kesk: uusi põlevkivikaevandusi pole vaja	http://www.delfi.ee/news/paevauudised/eesti/kesk-uusi-polevkivikaevandusi-pole-vaja?id=14163213
31.10.2006	Postimees	Uuring: idavirumaalased toetavad põlevkivikaevanduse laiendamist	http://www.postimees.ee/1593765/uuring-idavirumaalased-toetavad-polevkivikaevanduse-laiendamist
01.11.2006	Delfi	Täna astub Eesti esimese sammu põlevkivist elektri tegemise lõpetamiseks	http://arileht.delfi.ee/news/uudised/tana-astub-eesti-esimese-sammu-polevkivist-elektri-tegemise-lopetamiseks?id=51062419
01.11.2006	Postimees	SDE tahab suuremat toetust taastuvenergiale	http://www.postimees.ee/1594303/sde-tahab-suuremat-toetust-taastuvenergiale
03.11.2006	Postimees	Eerik-Niiles Kross: Tuumajaam on tuumakas mõte	http://arvamus.postimees.ee/1594887/eerik-niiles-kross-tuumajaam-on-tuumakas-mote?_ga=1.163329780.997560386.1466368422
06.11.2006	Delfi	VKG Oil pani tööle uue destillatsiooniahju	http://arileht.delfi.ee/news/uudised/vkg-oil-pani-toole-uue-destillatsiooniahju?id=51063108
07.11.2006	Postimees	Eesti Energia tahab paisata Jordaaniasse kümme miljardit krooni	http://majandus24.postimees.ee/1596023/eesti-energia-tahab-paisata-jordaaniasse-kumme-miljardit-krooni?_ga=1.163329780.997560386.1466368422
10.11.2006	Postimees	Rein Randver: Põlevkivi on rikkus, mida tuleb säästlikult kulutada	http://arvamus.postimees.ee/1597111/rein-randver-polevkivi-on-rikkus-mida-tuleb-saastlikult-kulutada?_ga=1.197286503.997560386.1466368422
20.11.2006	Delfi	Keskkonnaühendused taotlevad põlevkivi kaevandamise mahtude vähendamist	http://arileht.delfi.ee/news/uudised/keskkonnauhendused-taotlevad-polevkivi-kaevandamise-mahtude-vahendamist?id=51064828
22.11.2006	Postimees	Rainer Nõlvak: Põlevkivisööja närib Eesti maapõue	http://arvamus.postimees.ee/1601335/rainer-nolvak-polevkivisooja-narib-eesti-maapoue?_ga=1.197286503.997560386.1466368422
25.11.2006	Postimees	Asutati Erakond Eestimaa Rohelised	http://www.postimees.ee/1602851/asutati-erakond-eestimaa-rohelised
29.11.2006	Delfi	Keskkonnaministeerium:	http://arileht.delfi.ee/news/uudised/keskkonnaministeerium-polevkivi-arengukava-tuleks-viia-

		Põlevkivi arengukava tuleks viia riigikokku	riigikokku?id=51066142
04.12.2006	Postimees	Riik kavandab taas ökomaksu	http://tarbija24.postimees.ee/1605671/riik-kavandab-taas-okomaksu?_ga=1.171719144.997560386.1466368422
13.12.2006	Postimees	Keskkonnaühendused soovitavad oluliselt tõsta põlevkivi ressursitasu	http://www.postimees.ee/1609087/keskkonnauhendused-soovitavad-oluliselt-tosta-polevkivi-ressursitasu
15.12 2006	Postimees	Rainer Nõlvak: Energiaplaneet Eesti	http://arvamus.postimees.ee/1609823/rainer-nolvak-energiaplaneet-eesti?_ga=1.167457270.997560386.1466368422
20.12.2006	Delfi	Looduse saastamine ei vähene	http://www.delfi.ee/news/paevauudised/eesti/looduse-saastamine-ei-vahene?id=14603829
21.12.2006	Postimees	Akadeemikud suurendaksid põlevkivi kaevandamist	http://majandus24.postimees.ee/1611811/akadeemikud-suurendaksid-polevkivi-kaevandamist?_ga=1.171719144.997560386.1466368422
03.01.2007	Postimees	Roheline partei loodab riigikokku saada 56 kohta	http://www.postimees.ee/1614899/roheline-partei-loodab-riigikokku-saada-5-6-kohta
25.01.2007	Delfi	Loomisel on põlevkivitehnoloogia arenduskesus	http://arileht.delfi.ee/news/uudised/loomisel-on-polevkivitehnoloogia-arenduskesus?id=51072911
29.01.2007	Postimees	Marek Strandberg: rohelised on muutuse Eesti poliitikas juba saavutanud	http://www.postimees.ee/1624241/marek-strandberg-rohelised-on-muutuse-eesti-poliitikas-juba-saavutanud
05.02.2007	Postimees	Riigikogu hakkab arutama põlevkivi arengukava	http://www.postimees.ee/1627089/riigikogu-hakkab-arutama-polevkivi-arengukava
07.03.2007	Delfi	Elumajad ehitatakse päikese abiga elektrijaamadeks	http://arileht.delfi.ee/news/uudised/elumajad-ehitatakse-paikese-abiga-elektrijaamadeks?id=51078367
14.03.2007	Postimees	Võimalikud koalitsioonipartnerid keskendusid keskkonnaküsimustele	http://www.postimees.ee/1640227/voimalikud-koalitsioonipartnerid-keskendusid-keskkonnakusimustele
16.04.2007	Postimees	Lotman: tooli alt ära tõmbamine kinkis rohelistele sõltumatuse	http://www.postimees.ee/1650633/lotman-tooli-alt-ara-tombamine-kinkis-rohelistele-soltumatuse
24.04.2007	Postimees	Die Presse: Eestisse kavatsetakse ehitada maailma võimsaim tuulepark	http://majandus24.postimees.ee/1653761/die-presse-eestisse-kavatsetakse-ehitada-maailma-voimsaim-tuulepark?_ga=1.175386986.997560386.1466368422
25.04.2007	Postimees	Muutused energiapoliitikas	http://arvamus.postimees.ee/1653885/muutused-energiapoliitikas?_ga=1.201661017.997560386.1466368422

26.04.2007	Postimees	Eesti Energia teenis 2,7 miljardit krooni puhaskasumit	http://majandus24.postimees.ee/1654601/eesti-energia-teenis-2-7-miljardit-krooni-puhaskasumit?_ga=1.201661017.997560386.1466368422
11.05.2007	Postimees	Eesti teadlased osalevad aktiivselt uute energialahenduste väljatöötamisel	http://majandus24.postimees.ee/1659883/eesti-teadlased-osalevad-aktiivselt-uute-energialahenduste-valjatootamisel?_ga=1.201661017.997560386.1466368422
22.05.2007	Postimees	Rohelised ootavad ökomaksureformi kiiremat elluviimist	http://majandus24.postimees.ee/1663633/rohelised-ootavad-okomaksureformi-kiiremat-elluviimist?_ga=1.201152870.997560386.1466368422
22.05.2007	Delfi	Rohelised: elektriaktsiisi venimisest võidavad reformierakonna suurrahastajad	http://arileht.delfi.ee/news/uudised/rohelised-elektriaktsiisi-venimisest-voidavad-reformierakonna-suurrahastajad?id=51087947
07.08.2007	Postimees	Kiviõli tehas võitleb riigi seatud takistustega	http://majandus24.postimees.ee/1689463/kivioli-tehas-voitleb-riigi-seatud-takistustega?_ga=1.243945933.997560386.1466368422
07.08.2007	Postimees	Juhtkiri: Kiviõli appikarje	http://arvamus.postimees.ee/1689435/juhtkiri-kivioli-appikarje?_ga=1.243945933.997560386.1466368422
13.08.2007	Postimees	Taavi Veskimägi: elektrimajanduse piiratud valikud	http://arvamus.postimees.ee/1691271/taavi-veskimagi-elektrimajanduse-piiratud-valikud?_ga=1.171798888.997560386.1466368422
26.08.2007	Postimees	Ilves nimetas kaevureid Ida-Virumaa selgrooks	http://www.postimees.ee/1695447/ilves-nimetas-kaevureid-ida-virumaa-selgrooks
22.09.2007	Postimees	Keskkonnaminister kahtlustab Kiviõli Keemiatööstust sohimängus	http://majandus24.postimees.ee/1706331/keskkonnaminister-kahtlustab-kivioli-keemiatoostust-sohimangus?_ga=1.206386907.997560386.1466368422
06.10.2007	Postimees	Kas kliimadiplomaatia päästab maailma?	http://www.postimees.ee/1711921/kas-kliimadiplomaatia-paastab-maailma
02.11.2007	Postimees	Uudse põlevkivikombaini toodang ületas miljoni tonni piiri	http://majandus24.postimees.ee/1722385/uudse-polevkivikombaini-toodang-uletas-miljoni-tonni-piiri?_ga=1.243421901.997560386.1466368422
06.11.2007	Postimees	Keskkonnaministeerium tahab põlevkivi kaevandamist piirata	http://majandus24.postimees.ee/1723809/keskkonnaministeerium-tahab-polevkivi-kaevandamist-piirata?_ga=1.243421901.997560386.1466368422
16.11.2007	Postimees	Eesti Energia otsib võimalusi kaevanduskäikude täitmiseks	http://www.postimees.ee/1727705/eesti-energia-otsib-voimalusi-kaevanduskaikude-taitmiseks
21.11.2007	Delfi	VKG rajas esimese põlevkivijäätmete euroladestusala	http://arileht.delfi.ee/news/uudised/vkg-rajas-esimese-polevkivijaatmete-euroladestusala?id=51109522

27.11.2007	Postimees	Energiaalasel nõupidamisel arutati põlevkiviga seonduvat	http://majandus24.postimees.ee/1732109/energiaalasel-noupidamisel-arutati-polevkiviga-seonduvat?_ga=1.267720262.997560386.1466368422
19.12.2007	Postimees	ETV: kvoodikärbe ähvardab toasooja hinda tõsta	http://majandus24.postimees.ee/1740501/etv-kvoodikarbe-ahvardab-toasooja-hinda-tosta?_ga=1.229848404.997560386.1466368422
31.12.2007	Delfi	Ojamaal algab peagi põlevkivi kaevandamine	http://www.delfi.ee/news/paevauudised/eesti/ojamaal-algab-peagi-polevkivi-kaevandamine?id=17823453
05.01.2008	Postimees	Keemiatehas soovib rajada tsemendivabrikut	http://majandus24.postimees.ee/1744501/keemiatehas-soovib-rajada-tsemendivabrikut?_ga=1.234126934.997560386.1466368422
21.01.2008	Postimees	Ida-Viru vallad ei toeta ressursimaksu jaotuse muutmist	http://www.postimees.ee/1750181/ida-viru-vallad-ei-toeta-ressursimaksu-jaotuse-muutmist
28.01.2008	Postimees	Riik asub põlevkivi kaevandamist piirama	http://www.postimees.ee/1752735/riik-asub-polevkivi-kaevandamist-piirama
30.01.2008	Postimees	Andrus Karnau: linnulaul? Milleks?	http://arvamus.postimees.ee/1753405/andrus-karnau-linnulaul-milleks?_ga=1.175791594.997560386.1466368422
30.01.2008	Postimees	Eksperdid tahavad seada põlevkiviõlile ekspordipiirangud	http://majandus24.postimees.ee/1753399/eksperdid-tahavad-seada-polevkiviolile-ekspordipiirangud?_ga=1.175791594.997560386.1466368422
24.02.2008	Delfi	Kiviõli tuhamäe uus “roheline” elu	http://forte.delfi.ee/news/teadus/kivioli-tuhamae-uus-roheline-elu?id=18276628
26.02.2008	Postimees	Juhan Parts sõidab Brüsselisse põlevkivielektrit kaitsma	http://majandus24.postimees.ee/1763089/juhan-parts-soidab-brusselisse-polevkivielektrit-kaitsma?_ga=1.201594457.997560386.1466368422
28.02.2008	Postimees	Parts sõdib Brüsselis põlevkivielektri eest	http://majandus24.postimees.ee/1764005/parts-sodib-brusselis-polevkivielektri-eest?_ga=1.201594457.997560386.1466368422
29.02.2008	Delfi	Eesti oma tuumajaam järjest võimalikum	http://arileht.delfi.ee/archive/eesti-oma-tuumajaam-jarjest-voimalikum?id=18324620
01.03.2008	Postimees	Andrus Karnau: rohelise rohu vaenlased	http://majandus24.postimees.ee/1764959/andrus-karnau-rohelise-rohu-vaenlased?_ga=1.201594457.997560386.1466368422
05.03.2008	Postimees	Tuumaenergia on kuni kaks korda odavam	http://www.postimees.ee/1766231/tuumaenergia-on-kuni-kaks-korda-odavam
11.03.2008	Postimees	Lapsepapudes bioenergeetika vajab arenguks survet tengelpungale	http://tartu.postimees.ee/1768385/lapsepapudes-bioenergeetika-vajab-arenguks-survet-tengelpungale?_ga=1.175970922.997560386.1466368422
12.03.2008	Postimees	Parts: energiavaidlustes ei tohi kaotada sidet reaalsusega	http://majandus24.postimees.ee/1769105/parts-energiavaidlustes-ei-tohi-kaotada-sidet-reaalsusega?_ga=1.175970922.997560386.1466368422

31.03.2008	Postimees	Margus Kaasik: miks elektri hind tõusis?	http://arvamus.postimees.ee/1776221/margus-kaasik-miks-elektri-hind-tousis?_ga=1.175970922.997560386.1466368422
03.04.2008	Postimees	Eesti Energia Narva tuhavälja tuulepark alustab tööd 2010. aastal	http://majandus24.postimees.ee/1777829/eesti-energia-narva-tuhavalja-tuulepark-alustab-tood-2010-aastal?_ga=1.175970922.997560386.1466368422
05.05.2008	Postimees	Asjatundja soovitab Eesti Energia kiiresti börsile viia	http://majandus24.postimees.ee/1790767/asjatundja-soovitab-eesti-energia-kiiresti-borsile-viia?_ga=1.130300615.997560386.1466368422
12.05.2008	Postimees	Hõlpelu nautinud põlevkiviõlitootjad saavad kaela rängad maksud	http://majandus24.postimees.ee/1793997/holpelu-nautinud-polevkiviolitootjad-saavad-kaela-rangad-maksud?_ga=1.158627570.997560386.1466368422
12.05.2008	Postimees	Roheliste arvates juhivad keskkonnaministrit põlevkivitöösturid	http://www.postimees.ee/1794139/roheliste-arvates-juhivad-keskkonnaministrit-polevkivitoosturid
17.05.2008	Postimees	Eesti peab põlevkivisõltuvusest vabanema	http://majandus24.postimees.ee/1796557/eesti-peab-polevkivisoltuvusest-vabanema?_ga=1.209875293.997560386.1466368422
19.05.2008	Postimees	Rohelised: riigikogus rikuti võrdse kohtlemise põhimõtet	http://www.postimees.ee/1797523/rohelised-riigikogus-rikuti-vordse-kohtlemise-pohimotet
02.06.2008	Delfi	Eesti Energia tahab saada Jordaania kütusešeigiks	http://arileht.delfi.ee/archive/eesti-energia-tahab-saada-jordaania-kutuseseigiks?id=19042760
03.06.2008	Postimees	Rohelised: minister õigustab põlevkivi raiskamist	http://majandus24.postimees.ee/1803489/rohelised-minister-oigustab-polevkivi-raiskamist?_ga=1.209875293.997560386.1466368422
06.06.2008	Postimees	Põlevkivi kaevandamine lõhestab võimuliitu	http://www.postimees.ee/1804683/polevkivi-kaevandamine-lohestab-voimuliitu
12.06.2008	Postimees	Põlevkivi arengukava sai valitsuselt heakskiidu	http://majandus24.postimees.ee/1806751/polevkivi-arengukava-sai-valitsuselt-heakskiidu?_ga=1.239278795.997560386.1466368422
26.06.2008	Postimees	Martin Pau: odav oleks olla surnud	http://tartu.postimees.ee/1810477/martin-pau-odav-oleks-olla-surnud?_ga=1.239278795.997560386.1466368422
24.07.2008	Postimees	Põlevkivituhk võib viia Eesti Euroopa Liidu vastu kohtusse	http://www.postimees.ee/22424/polevkivituhk-voib-viia-eesti-euroopa-liidu-vastu-kohtusse
17.09.2008	Postimees	Tõnis Kõiv: vaja on alustada oma tuumaenergia arendamisega	http://www.postimees.ee/33967/tonis-koiv-vaja-on-alustada-oma-tuumaenergia-arendamisega
18.09.2008	Postimees	Taavi Madiberk: Eesti vajab energiaagentuuri	http://www.postimees.ee/34206/taavi-madiberk-eesti-vajab-energiaagentuuri
30.09.2008	Postimees	Rohelised: valitsus kasvatab majandust tulevaste põlvede	http://www.postimees.ee/37257/rohelised-valitsus-kasvatab-majandust-tulevaste-polvede-arvelt

		arvelt	
06.10.2008	Delfi	Õhu reostamine kasvas veerandi võrra	http://www.delfi.ee/news/paevauudised/eesti/ohu-reostamine-kasvas-veerandi-vorra?id=20041880
13.10.2008	Postimees	Tamkivi: põlevkivikaevandamist ei saa jõuga vähendada	http://majandus24.postimees.ee/40503/tamkivi-polevkivikaevandamist-ei-saa-jouga-vahendada?_ga=1.129187524.997560386.1466368422
21.10.2008	Postimees	Sotsid: tulevikus tuleb põlevkivi kaevandamist vähendada	http://majandus24.postimees.ee/42512/sotsid-tulevikus-tuleb-polevkivi-kaevandamist-vahendada?_ga=1.243544397.997560386.1466368422
21.10.2008	Postimees	Põlevkivi võib kaevandada kuni 20 miljonit tonni aastas	http://majandus24.postimees.ee/42504/polevkivi-voib-kaevandada-kuni-20-miljonit-tonni-aastas?_ga=1.243544397.997560386.1466368422
22.10.2008	Postimees	Juhan Parts: energia eest tuleb maksta. Ja palju!	http://arvamus.postimees.ee/42629/juhan-parts-energia-eest-tuleb-maksta-ja-palju?_ga=1.243544397.997560386.1466368422
22.10.2008	Postimees	Rohelised: põlevkivi arengukava viib suurema saasteni	http://majandus24.postimees.ee/42851/rohelised-polevkivi-arengukava-viib-suurema-saasteni?_ga=1.243544397.997560386.1466368422
03.11.2008	Postimees	Eesti Energia tahab julgeolekumaksu	http://majandus24.postimees.ee/45676/eesti-energia-tahab-julgeolekumaksu?_ga=1.177041901.997560386.1466368422
03.11.2008	Postimees	Juhtkiri: Eesti energia	http://arvamus.postimees.ee/45665/juhtkiri-eesti-energia?_ga=1.177041901.997560386.1466368422
03.11.2008	Postimees	Eesti Energia asutab ühisettevõtte tehnoloogiaarendajaga	http://majandus24.postimees.ee/45728/eesti-energia-asutab-uhisettevotte-tehnoloogiaarendajaga?_ga=1.139296507.997560386.1466368422
07.11.2008	Delfi	Reformierakond hävitab Virumaad	http://www.delfi.ee/archive/reformierakond-havitab-virumaad?id=20276682
11.12.2008	Postimees	Rohelised kinkisid keskkonnaministrile kella	http://www.postimees.ee/57420/rohelised-kinkisid-keskkonnaministrile-kella
17.12.2008	Postimees	Tõnis Kõiv: Eesti vajab tuumajaama	http://arvamus.postimees.ee/59385/tonis-koiv-eesti-vajab-tuumajaama?_ga=1.243153226.997560386.1466368422
19.02.2009	Postimees	Ministeerium: kaevandamisel tuleb rohkem arvestada keskkonnanõuetega	http://www.postimees.ee/84816/ministeerium-kaevandamisel-tuleb-rohkem-arvestada-keskkonnanouetega
18.02.2009	Delfi	Eelarvekärped halvendavad keskkonna olukorda	http://www.delfi.ee/news/paevauudised/eesti/eelarvekarped-halvendavad-keskkonna-olukorda?id=21272791
02.03.2009	Postimees	Liive: elektrijaamad võivad kriisi pärast ehitamata jääda	http://majandus24.postimees.ee/88587/liive-elektrijaamad-voivad-kriisi-parast-ehitamata-jaada?_ga=1.201153126.997560386.1466368422

16.03.2009	Postimees	Keskerakonna volikogu toetas tuumajaama rajamist Eestisse	http://majandus24.postimees.ee/94788/keskerakonna-volikogu-toetas-tuumajaama-rajamist-eestisse?_ga=1.201153126.997560386.1466368422
16.03.2009	Postimees	Sirje Niitra: tuumajaama vastu ei maksa sõdida	http://www.postimees.ee/95025/sirje-niitra-tuumajaama-vastu-ei-maksa-sodida
25.03.2009	Postimees	VKG peatab tehase ehituse	http://majandus24.postimees.ee/98975/vkg-peatab-tehase-ehituse?_ga=1.225800914.997560386.1466368422
02.04.2009	Delfi	Estonia kaevanduses avati kaasaegne killustikukompleks	http://arileht.delfi.ee/news/uudised/estonia-kaevanduses-avati-kaasaegne-killustikukompleks?id=51164275
29.04.2009	Postimees	Tehnikaülikool valib tuumatöötajaid	http://majandus24.postimees.ee/112994/tehnikaulikool-valib-tuumatootajaid?_ga=1.225800914.997560386.1466368422
13.05.2009	Postimees	Miljon tonni põlevkivijääke maetakse teesse	http://majandus24.postimees.ee/118510/miljon-tonni-polevkivijaake-maetakse-teesse?_ga=1.225800914.997560386.1466368422
23.05.2009	Postimees	Eesti Energia panustab miljardeid kroone põlevkivienergiasse	http://majandus24.postimees.ee/122867/eesti-energia-panustab-miljardeid-kroone-polevkivienergiasse?_ga=1.205263448.997560386.1466368422
28.05.2009	Postimees	Põlevkivi kaevandamismahuks jääb 20 miljonit tonni	http://majandus24.postimees.ee/124948/polevkivi-kaevandamismahuks-jaab-20-miljonit-tonni?_ga=1.167009654.997560386.1466368422
11.06.2009	Postimees	Valitsusliit ja rohelised tõstavad kütuseaktsiisi ja keskkonnatasusid	http://www.postimees.ee/130710/valitsusliit-ja-rohelised-tostavad-kutuseaktsiisi-ja-keskkonnatasusid
12.06.2009	Delfi	Kokkulepe rohelistega paisutab kütte- ja veearveid	http://www.delfi.ee/news/paevauudised/eesti/kokkulepe-rohelistega-paisutab-kutte-ja-veearveid?id=23886173
12.06.2009	Postimees	Ettevõtjad ägavad rohelise valitsuse maksukava all	http://majandus24.postimees.ee/130956/ettevotjad-agavad-rohelise-valitsuse-maksukava-all?_ga=1.201601753.997560386.1466368422
12.06.2009	Postimees	Liive soovitab valitsusele naftamaksu	http://majandus24.postimees.ee/131043/liive-soovitab-valitsusele-naftamaksu?_ga=1.201601753.997560386.1466368422
14.06.2009	Delfi	Võimuliidu flirt rohelistega ahistab tsemenditehast	http://arileht.delfi.ee/news/uudised/voimuliidu-flirt-rohelistega-ahistab-tsemenditehast?id=23918705
15.06.2009	Delfi	Liit: keskkonnatasude tõus viib töö 4000 inimeselt	http://arileht.delfi.ee/news/uudised/liit-keskkonnatasude-tous-viib-too-4000-inimeselt?id=23934677
15.06.2009	Delfi	Keskkonnatasud tõusevad väiksemas mahus	http://www.delfi.ee/news/paevauudised/eesti/keskkonnatasud-tousevad-vaiksemas-mahus?id=23937731
06.07.2009	Delfi	Eesti saab uue põlevkivielektrijaama	http://forte.delfi.ee/news/teadus/eesti-saab-uue-polevkivielektrijaama?id=24411121

10.07.2009	Postimees	Eesti Energia hakkab põlevkivist transpordikütuseid tootma	http://majandus24.postimees.ee/140591/eesti-energia-hakkab-polevkivist-transpordikutuseid-tootma?_ga=1.239426123.997560386.1466368422
05.08.2009	Postimees	Einari Kisel: kas Eesti on tõesti ajast maas?	http://majandus24.postimees.ee/149395/einari-kisel-kas-eesti-on-toesti-ajast-maas?_ga=1.267538758.997560386.1466368422
14.09.2009	Postimees	Tasude tõus võib viia kaevandusfirmad raskustesse	http://majandus24.postimees.ee/163583/tasude-tous-voib-viia-kaevandusfirmad-raskustesse?_ga=1.267538758.997560386.1466368422
15.09.2009	Postimees	Martin Kruus : mere tuulepargid versus põlevkivienergia	http://arvamus.postimees.ee/163922/martin-kruus-mere-tuulepargid-versus-polevkivienergia?_ga=1.168631785.997560386.1466368422
05.11.2009	Delfi	Kunda Nordic Tsement avas tahkete jäätmekütuste koospõletamise liini	http://arileht.delfi.ee/news/uudised/kunda-nordic-tsement-avas-tahkete-jaatmekutuste-koospoletamise-liini?id=51181757
14.11.2009	Delfi	Marek Strandberg: Kuidas Eesti taas rikkaks saab?	http://www.delfi.ee/archive/marek-strandberg-kuidas-eesti-taas-rikkaks-saab?id=26888553
21.12.2009	Delfi	Majandusbuum on jätnud keskkonnale hiigelsuure jälje	http://arileht.delfi.ee/news/uudised/majandusbuum-on-jatnud-keskkonnale-hiigelsuure-jalje?id=51185092
23.12.2009	Postimees	Eurorahadega suletakse kaks suurt poolkoksiprügilat	http://majandus24.postimees.ee/204394/eurorahadega-suletakse-kaks-suurt-poolkoksiprugilat?_ga=1.142490234.997560386.1466368422
28.12.2009	Postimees	Luxembourg jäi uskuma Eesti ettevõtjate pisaraid	http://majandus24.postimees.ee/168714/luxembourg-jai-uskuma-eesti-ettevotjate-pisaraid?_ga=1.168631785.997560386.1466368422
08.01.2010	Postimees	Põlevkivikaevanduse rajamine toob maarahvale pisarad silma	http://majandus24.postimees.ee/209260/polevkivikaevanduse-rajamine-toob-maarahvale-pisarad-silma?_ga=1.129326660.997560386.1466368422
27.01.2010	Postimees	Parts: muret teeb hoiak, et riigikogu ei huvita uued töökohad	http://majandus24.postimees.ee/217450/parts-muret-teeb-hoiak-et-riigikogu-ei-huvita-uued-tookohad?_ga=1.129326660.997560386.1466368422
05.02.2010	Postimees	Kaja Kallas: kummaline otsus põlevkivikatelde kohta	http://majandus24.postimees.ee/221155/kaja-kallas-kummaline-otsus-polevkivikatelde-kohta?_ga=1.243096266.997560386.1466368422
10.03.2010	Delfi	Kaevandusmaht Estonias kasvab kahekordseks	http://arileht.delfi.ee/news/uudised/kaevandusmaht-estonias-kasvab-kahekordseks?id=51193073
17.03.2010	Postimees	Vaikse valla rahvas protesteerib ägedalt uue kaevanduse vastu	http://majandus24.postimees.ee/237947/vaikse-valla-rahvas-protesteerib-agedalt-uue-kaevanduse-vastu?_ga=1.243096266.997560386.1466368422
06.04.2010	Postimees	Kiviõli elanikud esitasid kaebuse Euroopa Komisjonile	http://majandus24.postimees.ee/246179/kivioli-elanikud-esitasid-kaebuse-euroopa-komisjonile?_ga=1.243096266.997560386.1466368422

06.04.2010	Delfi	Rohelised: erafirma rikub kaevandust rajades seadust	http://www.delfi.ee/news/paevauudised/eesti/rohelised-erafirma-rikub-kaevandust-rajades-seadust?id=30253461
27.04.2010	Postimees	Eesti Energia börsiplaan toidab kasuminälga	http://majandus24.postimees.ee/255334/eesti-energia-borsiplaan-toidab-kasuminalga?_ga=1.163287540.997560386.1466368422
03.05.2010	Postimees	Eesti Energia vajab rohkem põlevkivi	http://majandus24.postimees.ee/257622/eesti-energia-vajab-rohkem-polevkivi?_ga=1.163287540.997560386.1466368422
03.05.2010	Postimees	SDE: Eesti Energia börsiplaan ohustab Virumaa keskkonda	http://majandus24.postimees.ee/257930/sde-eesti-energia-borsiplaan-ohustab-virumaa-keskkonda?_ga=1.163287540.997560386.1466368422
10.05.2010	Postimees	ELF: saja-aastasel looduskaitsel on kehvake tulevikuvisioon	http://www.postimees.ee/260901/elf-saja-aastasel-looduskaitsel-on-kehvake-tulevikuvisioon
17.05.2010	Postimees	Eesti Energia Jordaania projekt neelab 600 miljonit	http://majandus24.postimees.ee/263857/eesti-energia-jordaania-projekt-neelab-600-miljonit?_ga=1.162758132.997560386.1466368422
04.06.2010	Postimees	Maaomanik: Kiviõli Keemiatööstus eksitab riiki ja avalikkust	http://majandus24.postimees.ee/283686/maaomanik-kivioli-keemiatoostus-eksitab-riiki-ja-avalikkust?_ga=1.162758132.997560386.1466368422
16.06.2010	Delfi	Maaomanikud said karjääri laiendamise vaidluses lõpliku võidu	http://arileht.delfi.ee/news/uudised/maaomanikud-said-karjaari-laiendamise-vaidluses-lopliku-voidu?id=31686771
20.06.2010	Delfi	Kiviõli Keemiatööstus taotleb kaevandamise laiendamist	http://arileht.delfi.ee/news/uudised/kivioli-keemiatoostus-taotleb-kaevandamise-laiendamist?id=32212939
01.07.2010	Delfi	Virulased kaebasid kaevanduse asjus Tederile	http://www.delfi.ee/news/paevauudised/eesti/virulased-kaebasid-kaevanduse-asjus-tederile?id=31408359
23.07.2010	Postimees	EK annab Eesti Energiale 1,14 miljonit eurot	http://majandus24.postimees.ee/291177/ek-annab-eesti-energiale-1-14-miljonit-eurot?_ga=1.201003622.997560386.1466368422
30.07.2010	Postimees	Portaal: Kiviõli Keemiatööstus jätkab linna õhu saastamist	http://majandus24.postimees.ee/293839/portaal-kivioli-keemiatoostus-jatkab-linna-ohu-saastamist?_ga=1.201003622.997560386.1466368422
13.10.2010	Postimees	Elektrihind ajas poliitikud vaidlema	http://majandus24.postimees.ee/326371/elektrihind-ajas-poliitikud-vaidlema?_ga=1.201003622.997560386.1466368422
19.10.2010	Postimees	Parts: põlevkivi roll maailmas on suurenemas	http://majandus24.postimees.ee/328483/parts-polevkivi-roll-maailmas-on-suurenemas?_ga=1.201003622.997560386.1466368422
21.10.2010	Delfi	Tamkivi palgamõrva lavastamisest: korraldavad seal mingisuguseid mänge	http://arileht.delfi.ee/news/uudised/tamkivi-palgamorva-lavastamisest-korraldavad-seal-mingisuguseid-mange?id=34115523

21.10.2010	Postimees	Tamkivi: Kiviõli ärimeeste «mängud» seavad ohtu kohalikud inimesed	http://www.postimees.ee/329861/tamkivi-kivioli-arimeeste-mangud-seavad-ohtu-kohalikud-inimesed
26.10.2010	Postimees	Kiviõli Keemiatööstus loobus kaevanduse laiendamise taotlusest	http://majandus24.postimees.ee/332344/kivioli-keemiatoostus-loobus-kaevanduse-laiendamise-taotlusest?_ga=1.209526234.997560386.1466368422
19.11.2010	Delfi	Riik kaalub uue põlevkivi kaevandamisloa osas kolme firma vahel	http://arileht.delfi.ee/news/uudised/riik-kaalub-uue-polevkivi-kaevandamisloa-osas-kolme-firma-vahel?id=35260733
31.12.2010	Postimees	Looduse fondi juht: kohalik elanik on jäetud infosulgu	http://www.postimees.ee/365318/looduse-fondi-juht-kohalik-elanik-on-jaetud-infosulgu
06.01.2011	Postimees	Parts: loodetavasti aitab keskkonnakirves mul väärarusaamu harvendada	http://www.postimees.ee/367876/parts-loodetavasti-aitab-keskkonnakirves-mul-vaararusaamu-harvendada
15.01.2011	Delfi	Rohelised panustavad kodanikupalgale ja poliitilise korra muutmisele	http://www.delfi.ee/news/paevauudised/eesti/rohelised-panustavad-kodanikupalgale-ja-poliitilise-korra-muutmisele?id=38476063
22.01.2011	Delfi	Sondalased protestivad keemiatööstusele kaevandamisloa andmise vastu	http://www.delfi.ee/news/paevauudised/eesti/sondalased-protestivad-keemiatoostusele-kaevandamisloa-andmise-vastu?id=38900651
27.01.2011	Delfi	Riik väljastas Kiviõli Keemiatööstusele kaevandamisloa	http://arileht.delfi.ee/news/uudised/riik-valjastas-kivioli-keemiatoostusele-kaevandamisloa?id=39253971
04.02.2011	Delfi	VKG vaidlustas Uus-Kiviõli kaevandamisloa väljastamise	http://arileht.delfi.ee/news/uudised/vkg-vaidlustas-uus-kivioli-kaevandamisloa-valjastamise?id=39719513
04.02.2011	Delfi	Kadri Paas: Ütle, kui palju sa maksad ja ma ütlen, kes sa oled	http://rahvahaal.delfi.ee/news/uudised/kadri-paas-utle-kui-palju-sa-maksad-ja-ma-utlen-kes-sa-oled?id=39724669
07.02.2011	Delfi	Looduse fondi juht: Eesti kasutab endiselt robustset koloniaalmajandust	http://www.delfi.ee/news/paevauudised/eesti/looduse-fondi-juht-eesti-kasutab-endiselt-robustset-koloniaalmajandust?id=39851991
16.02.2011	Postimees	Andrus Karnau: poliitikute ühisosa - põlevkivita pole tulevikku	http://majandus24.postimees.ee/389457/andrus-karnau-poliitikute-uhisosa-polevkivita-pole-tulevikku?_ga=1.209542618.997560386.1466368422
03.03.2011	Postimees	Veel kord tuumajaama rajamisest Lääne-Virumaale	http://virumaateataja.postimees.ee/396309/veel-kord-tuumajaama-rajamisest-laane-virumaale?_ga=1.209542618.997560386.1466368422

10.03.2011	Delfi	VKG plaanib teise õlitehase ehitada kahe järgneva aastaga	http://arileht.delfi.ee/news/uudised/vkg-plaanib-teise-olitehase-ehitada-kahe-jargneva-aastaga?id=41859065
21.03.2011	Postimees	Akadeemikud: nüüdistuumajaamad on ohutud	http://pluss.postimees.ee/405687/akadeemikud-nuudistuumajaamad-on-ohutud?_ga=1.209542618.997560386.1466368422
22.03.2011	Delfi	Halduskohus keelas Põhja-Kiviõli karjääris kaevandamise	http://arileht.delfi.ee/news/uudised/halduskohus-keelas-pohja-kivioli-karjaaris-kaevandamise?id=42535815
24.03.2011	Delfi	Maaomanikud: Kiviõli Keemiatööstus jätkab kaevandamist vaatamata kohtu keelule	http://arileht.delfi.ee/news/uudised/maaomanikud-kivioli-keemiatoostus-jatkab-kaevandamist-vaatamata-kohtu-keelule?id=42663259
25.03.2011	Delfi	Komisjon: Kiviõli Keemiatööstus langes vale ohvriks	http://arileht.delfi.ee/news/uudised/komisjon-kivioli-keemiatoostus-langes-vale-ohvriks?id=51294267
06.04.2011	Postimees	Kiviõli ähvardab sotsiaalne katastroof	http://virumaateataja.postimees.ee/414397/kivioli-ahvardab-sotsiaalne-katastroof?_ga=1.175272298.997560386.1466368422
09.04.2011	Delfi	Keskkonnaminister Pentus: ärme maali põlevkivist tonti	http://www.delfi.ee/news/paevauudised/eesti/keskkonnaminister-pentus-arme-maali-polevkivist-tonti?id=43616641
13.04.2011	Postimees	Valitsusjuhi meelest survestab Kiviõli keemiatööstus kohut	http://majandus24.postimees.ee/418865/valitsusjuhi-meelest-survestab-kivioli-keemiatoostus-kohut?_ga=1.175272298.997560386.1466368422
19.04.2011	Delfi	Toomas Tamm müüb Kiviõli Keemiatööstust	http://arileht.delfi.ee/news/uudised/toomas-tamm-muub-kivioli-keemiatoostust?id=51295674
29.04.2011	Delfi	Eesti Energia Kaevanduste aherainega korrastatakse Kohtla-Järve poolkoksimäed	http://eestielu.delfi.ee/idavirumaa/elu/eesti-energia-kaevanduste-aherainega-korrastatakse-kohtla-jarve-poolkoksimaed?id=44992315
30.04.2011	Delfi	Juhtkiri: keskkonna pingpong Eesti ja Euroopa vahel	http://arvamus.postimees.ee/427360/juhtkiri-keskkonna-pingpong-eesti-ja-euroopa-vahel?_ga=1.138567163.997560386.1466368422
07.05.2011	Delfi	Kiviõli elanik: julgen nüüd jälle poes käia!	http://www.delfi.ee/news/paevauudised/eesti/kivioli-elanik-julgen-nuud-jalle-poes-kaia?id=45478641
10.05.2011	Delfi	Uus-Kiviõli kaevandamisloa vaidlus on jõudnud kohtusse	http://arileht.delfi.ee/news/uudised/uus-kivioli-kaevandamisloa-vaidlus-on-joudnud-kohtusse?id=45639243
25.05.2011	Delfi	Omanike Keskliit: Eestisse tuleb ehitada tuumajaam	http://www.delfi.ee/archive/omanike-keskliit-eestisse-tuleb-ehitada-tuumajaam?id=46575364
09.06.2011	Postimees	VKG kavatseb investeerida kümnendiga 14 miljardit krooni	http://majandus24.postimees.ee/465334/vkg-kavatseb-investeerida-kumnendiga-14-miljardit-krooni?_ga=1.162937332.997560386.1466368422

20.06.2011	Delfi	Akadeemik Anto Raukas: Elektri hind võib tegelikult kolmekordistuda	http://arileht.delfi.ee/archive/akadeemik-anto-raukas-elektri-hind-voib-tegelikult-kolmekordistuda?id=48132803
01.07.2011	Postimees	Rene Tammist: hullus või tark energiapoliitika?	http://pluss.postimees.ee/485302/rene-tammist-hullus-voi-tark-energiapoliitika?_ga=1.162937332.997560386.1466368422
04.07.2011	Delfi	Hans H. Luik: Määramatuses jääb vaid usaldada parimaid päid	http://epl.delfi.ee/news/arvamus/hans-h-luik-maaramatuses-jaab-vaid-usaldada-parimaid-paid?id=51299366
07.07.2011	Postimees	Hakkpuidu põletamine Narvas ei ole raiskamine ega amoraalne rohepesu	http://virumaateataja.postimees.ee/490770/hakkpuidu-poletamine-narvas-ei-ole-raiskamine-ega-amoraalne-rohepesu?_ga=1.162937332.997560386.1466368422
09.07.2011	Delfi	Veskimägi Delfile: oleme nautinud madalat elektrienergia hinda looduse ja tuleviku arvelt	http://www.delfi.ee/news/paevauudised/eesti/veskimagi-delfile-oleme-nautinud-madalat-elektrienergia-hinda-looduse-ja-tuleviku-arvelt?id=49288941
13.07.2011	Delfi	Rene Tammist: Puiduga on targematki teha kui Eesti Energia kateldes põletada	http://www.delfi.ee/archive/rene-tammist-puiduga-on-targematki-teha-kui-eesti-energia-kateldes-poletada?id=49488615
19.07.2011	Postimees	Mihkel Veiderma: energia maailmas, Euroopas ja Eestis	http://majandus24.postimees.ee/502794/mihkel-veiderma-energia-maailmas-euroopas-ja-eestis?_ga=1.235739465.997560386.1466368422
03.08.2011	Delfi	VKG: põlevkivi maksustamine peaks toimuma küttevääртuse põhiselt	http://arileht.delfi.ee/news/uudised/vkg-polevkivi-maksustamine-peaks-toimuma-kuttevaartuse-pohiselt?id=50647139
31.08.2011	Postimees	VKG kavatseb fosforiiti kaevandama hakata	http://pluss.postimees.ee/547016/vkg-kavatseb-fosforiiti-kaevandama-hakata?_ga=1.167657078.997560386.1466368422
06.09.2011	Postimees	Aktuaalne: Fosforiit kütab taas kirgi	http://virumaateataja.postimees.ee/553516/aktuaalne-fosforiit-kutab-taas-kirgi?_ga=1.167657078.997560386.1466368422
08.09.2011	Delfi	Veskimägi: ilma toetuseta pole taastuvenergia eesmärke võimalik saavutada	http://arileht.delfi.ee/news/uudised/veskimagi-ilma-toetuseta-pole-taastuvenergia-eesmarke-voimalik-saavutada?id=57377726
17.09.2011	Postimees	Kiviõli Keemiatööstus asus end parandama	http://virumaateataja.postimees.ee/566950/kivioli-keemiatoostus-asus-end-parandama?_ga=1.167657078.997560386.1466368422
29.09.2011	Delfi	Eesti küsib Eesti Energiale tasuta kvooti 300 miljoni euro ulatuses	http://arileht.delfi.ee/news/uudised/eesti-kusib-eesti-energiale-tasuta-kvooti-300-miljoni-euro-ulatuses?id=58805630
11.10.2011	Delfi	Eesti Energia sai loa Uus-Kiviõlis kaevandamiseks	http://arileht.delfi.ee/news/uudised/eesti-energia-sai-loa-uus-kiviolis-kaevandamiseks?id=59539148

11.10.2011	Delfi	Eesti Energia hakkab Jordaanias elektrijaama ehitama	http://arileht.delfi.ee/news/uudised/eesti-energia-hakkab-jordaanias-elektrijaama-ehitama?id=59546428
31.10.2011	Delfi	Rene Tammist: taastuvenergia osakaalu tõusu serveeritakse kui midagi kriminaalset	http://arileht.delfi.ee/news/uudised/rene-tammist-taastuvenergia-osakaalu-tousu-serveeritakse-kui-midagi-kriminaalset?id=60785013
04.11.2011	Delfi	Maaomanikud: Kiviõli Keemiatööstus kaevandab vajaliku loata	http://arileht.delfi.ee/news/uudised/maaomanikud-kivioli-keemiatoostus-kaevandab-vajaliku-loata?id=61068251
07.11.2011	Postimees	Eesti põlevkivi seisab Euroopa kliimapoliitikal risti jalus	http://majandus24.postimees.ee/624676/eesti-polevkivi-seisab-euroopa-kliimapoliitikal-risti-jalus?_ga=1.129654468.997560386.1466368422
12.11.2011	Delfi	Kiviõli Keemiatööstus kavandab Sondasse kaevandust	http://arileht.delfi.ee/news/uudised/kivioli-keemiatoostus-kavandab-sondasse-kaevandust?id=61485518
18.11.2011	Postimees	Rahvas ei taha fosforiidist kuuldagi	http://virumaateataja.postimees.ee/637858/rahvas-ei-taha-fosforiidist-kuuldagi?_ga=1.158733682.997560386.1466368422
08.12.2011	Postimees	Indrek Saar: aeg teha põlevkivielektriga lõpparve!	http://arvamus.postimees.ee/661636/indrek-saar-aeg-teha-polevkivielektriga-lopparve?_ga=1.158733682.997560386.1466368422
21.12.2011	Delfi	Eesti Energia võttis konkurentsiametist hinnatõusu taotluse tagasi	http://arileht.delfi.ee/news/uudised/eesti-energia-vottis-konkurentsiametist-hinnatousu-taotluse-tagasi?id=63659436
12.01.2012	Postimees	Kiviõli Keemiatööstuse õlitootmine võib mitu korda kasvada	http://majandus24.postimees.ee/700016/kivioli-keemiatoostuse-olitootmine-voib-mitu-korda-kasvada?_ga=1.238762696.997560386.1466368422
02.01.2012	Postimees	Hannes Tamjärv: Eesti energiapoliitika on saastamiskeskne	http://arvamus.postimees.ee/725228/hannes-tamjarv-eesti-energiapoliitika-on-saastamiskeskne?_ga=1.238762696.997560386.1466368422
13.02.2012	Delfi	Avalik kiri Juhan Partsile põlevkivienergeetika subsideerimisest	http://www.delfi.ee/archive/avalik-kiri-juhan-partsile-polevkivienergeetika-subsideerimisest?id=63913743
13.02.2012	Postimees	Rohelise elektri pooldajad nõuavad põlevkivile naftamaksu	http://majandus24.postimees.ee/737324/rohelise-elektri-pooldajad-nouavad-polevkivile-naftamaksu?_ga=1.238762696.997560386.1466368422
15.02.2012	Delfi	Keit Pentus kritiseerib Partsi eelnõu: see põlistab saastava põlevkivielektri tootmist	http://www.delfi.ee/news/paevauudised/eesti/keit-pentus-kritiseerib-partsi-eelnou-see-polistab-saastava-polevkivielektri-tootmist?id=63922119

29.02.2012	Postimees	Eesti suurettevõtted tõmbavad tarbijad rohepesuga haneks	http://www.postimees.ee/754776/eesti-suurettevotted-tombavad-tarbijad-rohepesuga-haneks
27.03.2012	Postimees	Partei- ja ärihuvid viisid taastuvelektri toetuse kärpe ummikusse	http://majandus24.postimees.ee/788038/partei-ja-arihuvid-viisid-taastuvelektri-toetuse-karpe-ummikusse?_ga=1.235216329.997560386.1466368422
11.04.2012	Delfi	VKG avas 14miljonilise maapealse usskonveieri	http://arileht.delfi.ee/news/uudised/vkg-avas-14miljonilise-maapealse-usskonveieri?id=64235575
20.04.2012	Postimees	Valitsus vaidleb põlevkivi üle	http://majandus24.postimees.ee/814592/valitsus-vaidleb-polevkivi-ule?_ga=1.235216329.997560386.1466368422
25.04.2012	Delfi	Ministeerium: puhta elektritootmise osakaal kasvab	http://arileht.delfi.ee/news/uudised/ministeerium-puhta-elektritootmise-osakaal-kasvab?id=64312277
01.05.2012	Postimees	Euroopa Liidu heitmekaubandus on läbi kukkunud	http://majandus24.postimees.ee/825788/euroopa-liidu-heitmekaubandus-on-labi-kukkunud?_ga=1.235216329.997560386.1466368422
02.05.2012	Delfi	Andrus Ansip: anname tootjatele põlevkivi liialt odavalt ära	http://arileht.delfi.ee/news/uudised/andrus-ansip-anname-tootjatele-polevkivi-liialt-odavalt-ara?id=64336069
04.05.2012	Postimees	Rohelise elektri toetus on elu ja surma küsimus	http://majandus24.postimees.ee/829550/rohelise-elektri-toetus-on-elu-ja-surma-kusimus?_ga=1.171212392.997560386.1466368422
04.05.2012	Postimees	Jaanus Purga: abiks riigimeestele	http://arvamus.postimees.ee/829892/jaanus-purga-abiks-riigimeestele?_ga=1.235216329.997560386.1466368422
05.05.2012	Postimees	Uus elektrijaam kerkib kullaauguna näiva õlitehase kõrvale	http://majandus24.postimees.ee/830870/uus-elektrijaam-kerkib-kullaauguna-naiva-olitehase-korvale?_ga=1.201077094.997560386.1466368422
09.05.2012	Postimees	Lembit Kaljuvee: maksud kui väärtustamine	http://arvamus.postimees.ee/835304/lembit-kaljuvee-maksud-kui-vaartu-stamine?_ga=1.201077094.997560386.1466368422
28.05.2012	Postimees	Liive: põlevkivijaamast tuleb kõige odavam roheline elekter	http://majandus24.postimees.ee/855878/liive-polevkivijaamast-tuleb-koige-odavam-roheline-elekter?_ga=1.244014541.997560386.1466368422
29.05.2012	Delfi	Eesti Energia pani Auvere elektrijaamale nurgakivi	http://eestielu.delfi.ee/idavirumaa/elu/eesti-energia-pani-auvere-elektrijaamale-nurgakivi?id=64459124
29.05.2012	Postimees	SEI: põlevkivi tapab keskkonnasäästlikud mudelid	http://majandus24.postimees.ee/857480/sei-polevkivi-tapab-keskkonnasaastlikud-mudelid?_ga=1.137575160.997560386.1466368422
05.06.2012	Delfi	Silvia Lotman: Happevihmad pole kadunud	http://ekspress.delfi.ee/arvamus/silvia-lotman-happevihmad-pole-kadunud?id=64494718
19.06.2012	Postimees	Timo Tatar: põlevkivielektrit ei tasu taastuvale vastandada	http://arvamus.postimees.ee/881524/timo-tatar-polevkivielektrit-ei-tasu-taastuvale-vastandada?_ga=1.137575160.997560386.1466368422

27.06.2012	Delfi	Euroopa Komisjon kinkis Eesti Energiale õiguse üle 300 miljoni euro eest saastada	http://arileht.delfi.ee/news/uudised/euroopa-komisjon-kinkis-eesti-energiale-oiguse-ule-300-miljoni-euro-eest-saastada?id=64602366
10.07.2012	Delfi	Anto Raukas: Põlevkivienergeetika toetamine on raha mahaviskamine	http://ekspress.delfi.ee/arvamus/anto-raukas-polevkivienergeetika-toetamine-on-raha-mahaviskamine?id=64656768
31.07.2012	Postimees	Tehismäe põleng teeb looduskaitsjad murelikuks	http://www.postimees.ee/924392/tehismae-poleng-teeb-looduskaitsjad-murelikuks
01.08.2012	Postimees	Tiit Kolk: riiklik eksperiment – toetus rikastele	http://arvamus.postimees.ee/926308/tiit-kolk-riiklik-eksperiment-toetus-rikastele?_ga=1.205789531.997560386.1466368422
02.08.2012	Postimees	Eestlased on jätkuvalt tuumaenergia vastu	http://www.postimees.ee/927686/eestlased-on-jatkuvalt-tuumaenergia-vastu
05.08.2012	Delfi	FOTOD: Vaata, milline näeb välja Kohtla-Järvel põlev poolkoksimägi	http://www.delfi.ee/news/paevauudised/eesti/fotod-vaata-milline-naeb-valja-kohtla-jarvel-polev-poolkoksimagi?id=64778278
09.08.2012	Postimees	Akadeemik: tuumajaamast pole pääsu	http://sakala.postimees.ee/934092/akadeemik-tuumajaamast-pole-paasu?_ga=1.176044394.997560386.1466368422
10.08.2012	Postimees	Tõnu Aas: roheline Narva elekter – tõmmata ja tõugata	http://arvamus.postimees.ee/936072/tonu-aas-roheline-narva-elekter-tommata-ja-tougata?_ga=1.176044394.997560386.1466368422
15.08.2012	Postimees	Eesti Energia: pole toetust, pole taastuvenergiat	http://majandus24.postimees.ee/940550/eesti-energia-pole-toetust-pole-taastuvenergiat?_ga=1.176044394.997560386.1466368422
21.08.2012	Postimees	Viru Keemia Grupi kasum kasvas ligi kolmandiku võrra	http://majandus24.postimees.ee/945874/viru-keemia-grupi-kasum-kasvas-ligi-kolmandiku-vorra?_ga=1.239409867.997560386.1466368422
22.08.2012	Delfi	Taavi Veskimägi: tekkinud on nõiaring, mis takistab energiaturu arengut Euroopas	http://arileht.delfi.ee/news/uudised/taavi-veskimagi-tekkinud-on-noiaring-mis-takistab-energiaturu-arengut-euroopas?id=64853262
22.08.2012	Delfi	Tõnis Meriste: energiatehnoloogiad arenevad ohutumaks ja puhtamaks	http://arileht.delfi.ee/news/uudised/tonis-meriste-energiatehnoloogiad-arenevad-ohutumaks-ja-puhtamaks?id=64854280
22.08.2012	Delfi	FOTOD: Taastuvenergia Koda: taastuvenergiale üleminek on majanduslikult kõige otstarbekam	http://arileht.delfi.ee/news/uudised/fotod-taastuvenergia-koda-taastuvenergiale-uleminek-on-majanduslikult-koige-otstarbekam?id=64854316
25.08.2012	Postimees	Paide kasutab rohelist energiat	http://jarvateataja.postimees.ee/950132/paide-kasutab-rohelist-energiat?_ga=1.239409867.997560386.1466368422
29.08.2012	Delfi	Aleksander Laane:	http://www.delfi.ee/archive/aleksander-laane-taastuvenergeetiliseks-poordeks-on-koik-

		Taastuvenergeetiliseks pöördeks on kõik valmis	valmis?id=64887964
27.09.2012	Delfi	Riigikontrolli audit: riigil on vaja ära otsustada, kuidas varustatakse Eestit elektriga tulevikus	http://www.delfi.ee/news/paevauudised/eesti/riigikontrolli-audit-riigil-on-vaja-ara-otsustada-kuidas-varustatakse-eestit-elektriga-tulevikus?id=65025212
10.10.2012	Postimees	Eesti Energia suurinvesteering suruti läbi puudulike andmete abil	http://majandus24.postimees.ee/1002180/eesti-energia-suurinvesteering-suruti-labi-puudulike-andmete-abil?_ga=1.234582614.997560386.1466368422
12.10.2012	Delfi	Riigikontroll: Parts võiks piinlikku olukorda sattumise vältimiseks riigikontrolli materjalid läbi lugeda	http://www.delfi.ee/news/paevauudised/eesti/riigikontroll-parts-voiks-piinlikku-olukorda-sattumise-valtimiseks-riigikontrolli-materjalid-labi-lugeda?id=65099938
17.10.2012	Delfi	Parts põlevkivijaamade ehitamisest: meil on uusi jaamu vaja, praegused on 50 aastat vanad	http://www.delfi.ee/news/paevauudised/eesti/parts-polevkivijaamade-ehitamisest-meil-on-uusi-jaamu-vaja-praegused-on-50-aastat-vanad?id=65122080
17.10.2012	Delfi	Sven Mikser: Elektrist, turvalisusest ja seaduslikkusest	http://epl.delfi.ee/news/arvamus/sven-mikser-elektrist-turvalisusest-ja-seaduslikkusest?id=65121002
27.10.2012	Postimees	Valitsus külmutas uute tuuleparkide rajamise	http://majandus24.postimees.ee/1020652/valitsus-kulmutas-uute-tuuleparkide-rajamise?_ga=1.168113769.997560386.1466368422
28.10.2012	Delfi	Urve Palo: majandusminister on otsustanud põlevkivielektriga Vene ruletti mängida	http://www.delfi.ee/news/paevauudised/eesti/urve-palo-majandusminister-on-otsustanud-polevkivielektriga-vene-ruletti-mangida?id=65177586
29.10.2012	Postimees	Juhan Parts: 50 aastat vana romu tuleb välja vahetada	http://majandus24.postimees.ee/1021838/juhan-parts-50-aastat-vana-romu-tuleb-valja-vahetada?_ga=1.168113769.997560386.1466368422
30.10.2012	Postimees	Hardo Pajula: investeeringutest, lüüriliselt	http://arvamus.postimees.ee/1023620/hardo-pajula-investeeringutest-luuriliselt?_ga=1.168113769.997560386.1466368422
16.11.2012	Delfi	Ago Õispuu: Auvere põlevkivijaama raha päikesepaneelidesse!	http://epl.delfi.ee/news/arvamus/ago-oispuu-auvere-polevkivijaama-raha-paikesepaneelidesse?id=65271422
23.12.2012	Delfi	Taavi Veskimägi: Kas usaldame soomlasi?	http://epl.delfi.ee/news/arvamus/taavi-veskimagi-kas-usaldame-soomlasi?id=65305250
26.11.2012	Delfi	100% taastuvenergiat: käsi kullas või istmik mullas?	http://epl.delfi.ee/news/arvamus/100-taastuvenergiat-kasi-kullas-voi-istmik-mullas?id=65316716

20.12.2012	Delfi	Eesti Energia õlitehas tootis esimese barreli põlevkiviõli	http://arileht.delfi.ee/news/uudised/eesti-energia-olitehas-tootis-esimese-barreli-polevkivioli?id=65436670
08.01.2013	Postimees	Mure põlevkivi kaevandamise pärast	http://virumaateataja.postimees.ee/1095498/mure-polevkivi-kaevandamise-parast?_ga=1.267735238.997560386.1466368422
31.01.2013	Delfi	FOTOD: President Ilves Ojamaa kaevanduse avamisel: tark oleks õppida põlevkivi paremini väärtustama	http://arileht.delfi.ee/news/uudised/fotod-president-ilves-ojamaa-kaevanduse-avamisel-tark-oleks-oppida-polevkivi-paremini-vaartustama?id=65611964
31.01.2013	Postimees	Põlevkiviõli maksustamise ettepanekud varsti laual	http://pluss.postimees.ee/1121514/polevkivioli-maksustamise-ettepanekud-varsti-laual?_ga=1.267735238.997560386.1466368422
02.02.2013	Postimees	Repliik: Põlev kivi	http://sakala.postimees.ee/1124000/repliik-polev-kivi?_ga=1.171711976.997560386.1466368422
03.03.2013	Postimees	Viru Keemia Grupp ehitab kütuseimpeeriumi	http://majandus24.postimees.ee/1148858/viru-keemia-grupp-ehitab-kutuseimpeeriumi?_ga=1.171212392.997560386.1466368422
05.04.2013	Delfi	Eesti Energia väävliheitmed on vähenenud ligi kolm korda	http://arileht.delfi.ee/news/uudised/eesti-energia-vaavliheitmed-on-vahenenud-ligi-kolm-korda?id=65926706
27.03.2013	Delfi	Keskkonnaminister: põlevkivi aastane kaevandamismaht ei tohi suureneda	http://maaleht.delfi.ee/news/maamajandus/uudised/keskkonnaminister-polevkivi-aastane-kaevandamismaht-ei-tohi-suureneda?id=65883808
04.04.2013	Postimees	Valitsus algatas põlevkivi arengukava koostamise	http://majandus24.postimees.ee/1190980/valitsus-algatas-polevkivi-arengukava-koostamise?_ga=1.141718138.997560386.1466368422
05.04.2013	Postimees	Börsile minek kaitseks Eesti Energia väärtust	http://majandus24.postimees.ee/1192122/borsile-minek-kaitseks-eesti-energia-vaartust?_ga=1.141718138.997560386.1466368422
07.04.2013	Postimees	Eesti Energia väävliheitmed on kümne aastaga vähenenud kolm korda	http://majandus24.postimees.ee/1192778/eesti-energia-vaavliheitmed-on-kumne-aastaga-vahenenud-kolm-korda?_ga=1.141718138.997560386.1466368422
10.04.2013	Delfi	FOTOD: kuidas Irus prügist elektrit tehakse	http://eestielu.delfi.ee/harjumaa/elu/fotod-kuidas-irus-prugist-elektrit-tehakse?id=65936224
06.05.2013	Delfi	Taastuvenergeetika lobist: põlevkivielektri hind ei kajasta veeta jäänud kaevude kahju	http://arileht.delfi.ee/news/uudised/taastuvenergeetika-lobist-polevkivielektri-hind-ei-kajasta-veeta-jaanud-kaevude-kahju?id=66083006
23.05.2013	Delfi	Valitsuse välklobilahing Brüsselis: päästa Eesti põlevkivitööstus	http://epl.delfi.ee/news/eesti/valitsuse-valklobilahing-brusselis-paasta-eesti-polevkivitoostus?id=66172346
24.05.2013	Delfi	Antti Moppel: direktiiv võib diislikütuse tootmise	http://arileht.delfi.ee/news/uudised/antti-moppel-direktiiv-voib-diislikutuse-tootmise-projektidele-kriipsu-peale-tommata?id=66180342

		projektidele kriipsu peale tõmmata	
01.06.2013	Postimees	Diislikütuse lõpp	http://majandus24.postimees.ee/1255302/diislikutuse-lopp?_ga=1.130906439.997560386.1466368422
01.06.2013	Postimees	Hinnatakse põlevkivi kaevandamise ja kasutamise mõju keskkonnale	http://majandus24.postimees.ee/1255528/hinnatakse-polevkivi-kaevandamise-ja-kasutamise-moju-keskkonnale?_ga=1.130906439.997560386.1466368422
01.06.2013	Delfi	Keskkonnaminister: põlevkivi kasutamise keskkonnasäästlikkus jätab endiselt soovida	http://arileht.delfi.ee/news/uudised/keskkonnaminister-polevkivi-kasutamise-keskkonnasaastlikkus-jatab-endiselt-soovida?id=66220658
02.06.2013	Postimees	Põlevkivi varjatud kulud	http://majandus24.postimees.ee/1248678/polevkivi-varjatud-kulud?_ga=1.130839879.997560386.1466368422
10.06.2013	Delfi	Juhan Parts: kaaluda võiks põlevkivi kaevandamismahu suurendamist	http://arileht.delfi.ee/news/uudised/juhan-parts-kaaluda-voiks-polevkivi-kaevandamismahu-suurendamist?id=66266456
12.06.2013	Postimees	Ameerika ekspert: Obama ajal põlevkiviäri ei tule	http://majandus24.postimees.ee/1266990/ameerika-ekspert-obama-ajal-polevkiviari-ei-tule?_ga=1.196892388.997560386.1466368422
27.06.2013	Postimees	Praxis: põlevkivitööstuse laiendamisel tuleb arvestada kohaliku arenguga	http://majandus24.postimees.ee/1283186/praxis-polevkivitoostuse-laiendamisel-tuleb-arvestada-kohaliku-arenguga?_ga=1.196892388.997560386.1466368422
19.07.2013	Delfi	Rene Tammist: Eestilt oodatakse põlevkivienergiast loobumist	http://arileht.delfi.ee/news/uudised/rene-tammist-eestilt-oodatakse-polevkivienergiast-loobumist?id=66465052
13.09.2013	Delfi	Ministeerium: keskkonnatasude tõus ei ole ettevõtetele ootamatu	http://arileht.delfi.ee/news/uudised/ministeerium-keskkonnatasude-tous-ei-ole-ettevotetele-ootamatu?id=66732781
24.09.2013	Postimees	Liive: me ei pea valima õli ja elektri vahel	http://majandus24.postimees.ee/2084366/liive-me-ei-pea-valima-oli-ja-elektri-vahel?_ga=1.209598042.997560386.1466368422
23.10.2013	Delfi	Eesti Energia Narva elektrijaamad taotlevad soojushinna tõusu	http://arileht.delfi.ee/news/uudised/eesti-energia-narva-elektrijaamad-taotlevad-soojushinna-tousu?id=66961144
25.10.2013	Delfi	EL-i kõrge ametnik: praegusel kujul põlevkivienergeetika kestma ei jää	http://epl.delfi.ee/news/valismaa/el-i-korge-ametnik-praegusel-kujul-polevkivienergeetika-kestma-ei-jaa?id=66971938
05.11.2013	Delfi	Riigikontroll: Eesti võiks	http://arileht.delfi.ee/news/uudised/riigikontroll-eesti-voiks-kaaluda-polevkivi-kasutamise-

		kaaluda põlevkivi kasutamise suuremat maksustamist	suuremat-maksustamist?id=67032886
05.11.2013	Postimees	Eesti Energia: põlevkivi maksustamisel kasutatakse valesid signaale	http://majandus24.postimees.ee/2586478/eesti-energia-polevkivi-maksustamisel-kasutatakse-valesid-signaale?_ga=1.176886509.997560386.1466368422
12.11.2013	Delfi	Minister: põlevkivitootmine jätab Eestis räpaka jälje	http://arileht.delfi.ee/news/uudised/minister-polevkivitootmine-jatab-eestis-rapaka-jalje?id=67077638
14.11.2013	Postimees	Põlevkivitööstus VKG võtab investeeringuteks 150 miljonit eurot laenu	http://majandus24.postimees.ee/2596744/polevkivitoostus-vkg-votab-investeeringuteks-150-miljonit-eurot-laenu?_ga=1.176886509.997560386.1466368422
21.11.2013	Delfi	Energiaagentuuri juht: fossiilkütused taanduvad aeglaselt	http://epl.delfi.ee/news/arvamus/energiaagentuuri-juht-fossiilkutused-taanduvad-aeglaselt?id=67133216
04.12.2013	Postimees	Eurotoetuse abil sai ühest Kiviõli poolkoksiprügilast haljasala, teisest aga spordikeskus	http://www.postimees.ee/2618116/eurotoetuse-abil-sai-uhest-kivioli-poolkoksiprugilast-haljasala-teisest-aga-spordikeskus
20.02.2014	Postimees	Eesti Energia loobus uue elektrijaama ehitusest	http://majandus24.postimees.ee/2703434/eesti-energia-loobus-uue-elektrijaama-ehitusest?_ga=1.130252231.997560386.1466368422
16.03.2014	Delfi	VIDEO: Valitsusliit lubas välistada fosforiidi kaevandamise	http://www.delfi.ee/news/paevauudised/eesti/video-valitsusliit-lubas-valistada-fosforiidi-kaevandamise?id=68249441
20.03.2014	Postimees	Riigikontroll: põlevkivi arengukava eesmärgid on täitmata	http://majandus24.postimees.ee/2733904/riigikontroll-polevkivi-arengukava-eesmargid-on-taitmata?_ga=1.129773892.997560386.1466368422
20.03.2014	Postimees	Uus valitsus lubab vähendada põlevkivi kaevandamist	http://majandus24.postimees.ee/2734066/uus-valitsus-lubab-vahendada-polevkivi-kaevandamist?_ga=1.135028025.997560386.1466368422
07.04.2014	Postimees	VKG astus diislikütuse tootmisele sammu lähemale	http://pluss.postimees.ee/2753000/vkg-astus-diislikutuse-tootmisele-sammu-lahemale?_ga=1.129773892.997560386.1466368422
21.04.2014	Postimees	VKG kasum kukkus oluliselt	http://majandus24.postimees.ee/2768926/vkg-kasum-kukkus-oluliselt?_ga=1.164462071.997560386.1466368422
22.04.2014	Delfi	Eesti Energia kummutab põlevkiviga seotud müüte	http://arileht.delfi.ee/news/uudised/eesti-energia-kummutab-polevkiviga-seotud-muute?id=68491961
13.05.2014	Postimees	VKG majanduslangusest: meid mõjutab pigem naftahinna kõikumine	http://majandus24.postimees.ee/2792710/vkg-majanduslangusest-meid-mojutab-pigem-naftahinna-koikumine?_ga=1.229994964.997560386.1466368422
26.05.2014	Postimees	Sandor Liive: Eesti –	http://www.postimees.ee/2806634/sandor-liive-eesti-energiajulgeoleku-riik

		energiajulgeoleku riik	
28.06.2014	Delfi	Õlitootjad: põlevkivi ressursitasude tõstmine ähvardab kaotada Ida-Virumaal 18 000 töökohta	http://www.delfi.ee/news/paevauudised/eesti/olitootjad-polevkivi-ressursitasude-tostmine-ahvardab-kaotada-ida-virumaal-18-000-tookohta?id=68957307
17.07.2014	Delfi	Keemiatööstuse liidu juht vastuseks keskkonnaministri tööstuste kriitikale: riik ei soovi pikalt ja targalt planeerida	http://arileht.delfi.ee/news/uudised/keemiatoostuse-liidu-juht-vastuseks-keskkonnaministri-toostuste-kriitikale-riik-ei-soovi-pikalt-ja-targalt-planeerida?id=69371913
21.07.2014	Delfi	Taastuvenergia Koda: kas põlevkivi sektori kõrgem maksustamine on põhjendatud?	http://arileht.delfi.ee/news/uudised/taastuvenergia-koda-kas-polevkivi-sektori-korgem-maksustamine-on-pohjendatud?id=69396491
29.07.2014	Postimees	Keskkonnaminister ei näe vajadust põlevkivi kaevemäära vähendamiseks	http://majandus24.postimees.ee/2871615/keskkonnaminister-ei-nae-vajadust-polevkivi-kaevemaara-vahendamiseks?_ga=1.129717828.997560386.1466368422
19.08.2014	Delfi	Eesti 2050. aastaks põlevkivielektrist vabaks ja kõik jalgratta selga, aasta läbi	http://epl.delfi.ee/news/eesti/eesti-2050-aastaks-polevkivielektrist-vabaks-ja-koik-jalgratta-selga-aasta-labi?id=69562843
19.08.2014	Postimees	Keskkonnatasu tõus võib põlevkivitööstuse uppi lüüa	http://pluss.postimees.ee/2892047/keskkonnatasu-tous-voib-polevkivitoostuse-uppi-luua?_ga=1.129717828.997560386.1466368422
21.08.2014	Postimees	Rohumaa keskkonnatasudest: rehaga vastu nina	http://majandus24.postimees.ee/2894331/rohumaa-keskkonnatasudest-rehaga-vastu-nina?_ga=1.129717828.997560386.1466368422
22.08.2014	Postimees	Keit Pentus-Rosimannus: mustast kullast rohkem kulda ja vähem mustust	http://majandus24.postimees.ee/2895253/keit-pentus-rosimannus-mustast-kullast-rohkem-kulda-ja-vahem-mustust?_ga=1.129717828.997560386.1466368422
26.08.2014	Postimees	Keskkonnaühendused: põlevkivitööstuse keskkonnatasude tõstmine on vältimatu	http://majandus24.postimees.ee/2898745/keskkonnauhendused-polevkivitoostuse-keskkonnatasude-tostmine-on-valtimatu?_ga=1.162869620.997560386.1466368422
28.08.2014	Postimees	Liit keskkonnatasudest: must kuld või must muld või hoopis tuld ja tõrva	http://majandus24.postimees.ee/2901419/liit-keskkonnatasudest-must-kuld-voi-must-muld-voi-hoopis-tuld-ja-torva?_ga=1.162869620.997560386.1466368422
08.09.2014	Postimees	Mihkel Pukk: rehepaplus põlevkiviga (?)	http://arvamus.postimees.ee/2912881/mihkel-pukk-rehepaplus-polevkiviga?_ga=1.242898634.997560386.1466368422
11.09.2014	Postimees	Liive: me teeme Eesti	http://majandus24.postimees.ee/2916893/liive-me-teeme-eesti-polevkivitoostuse-kumne-aastaga-

		põlevkivitööstuse kümne aastaga kaks korda paremaks	kaks-korda-paremaks?_ga=1.242898634.997560386.1466368422
07.10.2014	Postimees	Rõivas: Eesti liigub kindlalt energiasõltumatuse poole	http://arvamus.postimees.ee/2912881/mihkel-pukk-rehepaplus-polevkiviga?_ga=1.242898634.997560386.1466368422
13.10.2014	Postimees	Ministeerium: keemiatööstuse liidu kampaania tekitab hämmeldust	http://majandus24.postimees.ee/2952497/ministeerium-keemiatoostuse-liidu-kampaania-tekitab-hammeldust?_ga=1.205738331.997560386.1466368422
15.10.2014	Delfi	PROPAGANDAVIDEO: keemiatöösturite massiivne kampaania: sihikule on võetud minister Pentus!	http://arileht.delfi.ee/news/uudised/propagandavideo-keemiatoosturite-massiivne-kampaania-sihikule-on-voetud-minister-pentus?id=69950525
15.10.2014	Delfi	Avalik pöördumine: Keemiatööstuse Liidu maavarade kampaania eksitab avalikkust	http://arileht.delfi.ee/news/uudised/avalik-poordumine-keemiatoostuse-liidu-maavarade-kampaania-eksitab-avalikkust?id=69950985
17.10.2014	Postimees	Elektritootjad näevad keskkonnatasude kasvus sektori hääbumist	http://majandus24.postimees.ee/2958317/elektritootjad-naevad-keskkonnatasude-kasvus-sektori-haabumist?_ga=1.205738331.997560386.1466368422
17.10.2014	Delfi	Minister: keskkonnatasude tõttu Ida-Virumaa töökohad ohus ei ole	http://arileht.delfi.ee/news/uudised/minister-keskkonnatasude-tottu-ida-virumaa-tookohad-ohus-ei-ole?id=69968089
20.10.2014	Postimees	Riigikontroll: Pentus-Rosimannus jäi põlevkivitasudega jänni	http://majandus24.postimees.ee/2960971/riigikontroll-pentus-rosimannus-jai-polevkivitasudega-janni?_ga=1.205738331.997560386.1466368422
24.10.2014	Postimees	Rõivas: ülemkogu otsus on oluline Eesti energiajulgeolekule	http://majandus24.postimees.ee/2965809/roivas-ulemkogu-otsus-on-oluline-eesti-energiajulgeolekule?_ga=1.139108091.997560386.1466368422
27.10.2014	Postimees	Akadeemikud: uued keskkonnatasu määrad vajavad analüüsi	http://majandus24.postimees.ee/2968585/akadeemikud-uued-keskkonnatasu-maarad-vajavad-analuusi?_ga=1.205738331.997560386.1466368422
27.10.2014	Postimees	Keskkonnatasud tõusevad 3-6 protsenti aastas	http://majandus24.postimees.ee/2968987/keskkonnatasud-tousevad-3-6-protsenti-aastas?_ga=1.205738331.997560386.1466368422
03.11.2014	Postimees	Riigikontroll: Ida-Virumaa vajab põlevkivitööstuse asemele uusi töökohti	http://majandus24.postimees.ee/2976977/riigikontroll-ida-virumaa-vajab-polevkivitoostuse-asemele-uusi-tookohti?_ga=1.234721750.997560386.1466368422
06.11.2014	Postimees	Keskkonnaorganisatsioonid: põlevkivi kaevandamise tasu tuleb tõsta	http://majandus24.postimees.ee/2981593/keskkonnaorganisatsioonid-polevkivi-kaevandamise-tasu-tuleb-tosta?_ga=1.234721750.997560386.1466368422

12.11.2014	Postimees	Mihkel Härm: 100 miljardi euro küsimus	http://arvamus.postimees.ee/2989123/mihkel-harm-100-miljardi-euro-kusimus?_ga=1.234721750.997560386.1466368422
15.11.2014	Delfi	VIDEO: Raskustes VKG koondas Ida-Virumaal esimesed töötajad	http://arileht.delfi.ee/news/uudised/video-raskustes-vkg-koondas-ida-virumaal-esimesed-tootajad?id=70156353
15.11.2014	Delfi	Kommiraha: VKG mahtude juures kasvaksid keskkonnatasud 85 000 eurot aastas	http://arileht.delfi.ee/news/uudised/kommiraha-vkg-mahtude-juures-kasvaksid-keskkonnatasud-85-000-eurot-aastas?id=70161195
16.11.2014	Postimees	Kukkuv naftahind peatab uute õlitehaste ehituse	http://majandus24.postimees.ee/2993607/kukkuv-naftahind-peatab-uute-olitehaste-ehituse?_ga=1.168631785.997560386.1466368422
03.12.2014	Delfi	Ministeeriumi vastus VKG süüdistustele: suurem kaevandamine kahjustaks keskkonda	http://arileht.delfi.ee/news/uudised/ministeeriumi-vastus-vkg-suudistustele-suurem-kaevandamine-kahjustaks-keskkonda?id=70284201
04.12.2014	Delfi	Sõerd: riik ei pea kohe vananenud tehnoloogia tõttu hätta sattunud firmat päästma minema	http://www.delfi.ee/news/paevauudised/eesti/soerd-riik-ei-pea-kohe-vananenud-tehnoloogia-tottu-hatta-sattunud-firmat-paastma-minema?id=70283613
17.12.2014	Postimees	Ülikoolid: riigil puudub teaduspõhine maavarapoliitika	http://majandus24.postimees.ee/3028875/ulikoolid-riigil-puudub-teaduspohine-maavarapoliitika?_ga=1.196352612.997560386.1466368422
17.12.2014	Postimees	Eesti õlitööstused võitsid hääletuse Euroopa parlamendis	http://majandus24.postimees.ee/3029247/eesti-olitoostused-voitsid-haaletuse-euroopa-parlamendis?_ga=1.196352612.997560386.1466368422
18.12.2014	Delfi	Valitsus hakkab arutama põlevkiviõlitootjate maksude sidumist nafta hinnaga	http://www.delfi.ee/news/paevauudised/eesti/valitsus-hakkab-arutama-polevkiviolitootjate-maksude-sidumist-nafta-hinnaga?id=70395515
06.01.2015	Delfi	VKG koondab mitusada inimest, ministrid "arutavad põlevkivitööstuse probleeme"	http://arileht.delfi.ee/news/uudised/vkg-koondab-mitusada-inimest-ministrid-arutavad-polevkivitoostuse-probleeme?id=70499717
08.01.2015	Postimees	Riik kavatseb VKG koondamiste tõttu kiiresti ressursitasude süsteemi muuta	http://majandus24.postimees.ee/3049193/riik-kavatseb-vkg-koondamiste-tottu-kiiresti-ressursitasude-susteemi-muuta?_ga=1.238359240.997560386.1466368422
12.01.2015	Delfi	Koondava VKG juht: oma kaevanduse põlevkiviga kannatame 25-dollari tasemel naftahinna välja	http://arileht.delfi.ee/news/uudised/koondava-vkg-juht-oma-kaevanduse-polevkiviga-kannatame-25-dollari-tasemel-naftahinna-valja?id=70545283

15.01.2015	Delfi	Keskkonnateoks valiti kaitsealade moodustamine, keskkonnakirve pälvis Eesti Keemiatööstuse Liit	http://arileht.delfi.ee/news/uudised/keskkonnateoks-valiti-kaitsealade-moodustamine-keskkonnakirve-palvis-eesti-keemiatoostuse-liit?id=70566337
17.01.2015	Postimees	Kaarel Tarand: põlevkivilõks	http://arvamus.postimees.ee/3059821/kaarel-tarand-polevkiviloks?_ga=1.238359240.997560386.1466368422
22.01.2015	Delfi	Keskkonnaminister Raidma: VKG probleemide ainus lahendus on kaevanduslimiitide tõstmine	http://arileht.delfi.ee/news/uudised/keskkonnaminister-raidma-vkg-probleemide-ainus-lahendus-on-kaevanduslimiitide-tostmine?id=70615197
02.02.2015	Delfi	Keskkonnaühendused: kasvatamise asemel tuleb põlevkivi kaevemahte otsustavalt vähendada	http://arileht.delfi.ee/news/uudised/keskkonnauhendused-kasvatamise-asemel-tuleb-polevkivi-kaevemahte-otsustavalt-vahendada?id=70697695
06.03.2015	Delfi	Eesti Energia uus juht: 51 miljonit eurot neelanud Utah' projekt jätab investorid külmaks	http://arileht.delfi.ee/news/uudised/eesti-energia-uus-juht-51-miljonit-eurot-neelanud-utah-projekt-jatab-investorid-kulmaks?id=70945157
22.03.2015	Postimees	Kaarel Tarand: jätke see maa sisse!	http://arvamus.postimees.ee/3130807/kaarel-tarand-jatke-see-maa-sisse?_ga=1.209600090.997560386.1466368422
07.04.2015	Delfi	KOALITSIOONILEPING: LOE, milles Reformierakond, sotsiaaldemokraadid ja IRL kokku leppisid!	http://www.delfi.ee/news/paevauudised/eesti/koalitsioonileping-loe-milles-reformierakond-sotsiaaldemokraadid-ja-irl-kokku-leppisid?id=71187431
12.04.2015	Delfi	Michal: põlevkivi võiks kaevandada endiselt 20 miljonit tonni aastas	http://arileht.delfi.ee/news/uudised/michal-polevkivi-voiks-kaevandada-endiselt-20-miljonit-tonni-aastas?id=71225565
23.04.2015	Delfi	Vastukaja: aktsiisitõusu asemel keskkonnatasud	http://epl.delfi.ee/news/arvamus/vastukaja-aktsiisitousu-asemel-keskkonnatasud?id=71304725
27.05.2015	Delfi	Riigikontroll: riik ei pea põlevkivijäätmeid oluliseks probleemiks	http://arileht.delfi.ee/news/uudised/riigikontroll-riik-ei-pea-polevkivijaatmeid-oluliseks-probleemiks?id=71570637
27.05.2015	Delfi	Keskkonnaministeerium: muutused põlevkivijäätmete vähendamisel ei sünni üleöö	http://arileht.delfi.ee/news/uudised/keskkonnaministeerium-muutused-polevkivijaatmete-vahendamisel-ei-sunni-uleoo?id=71573413
04.06.2015	Postimees	Valitsus toetas põlevkivi tagantjärgi kaevandamist	http://majandus24.postimees.ee/3213179/valitsus-toetas-polevkivi-tagantjargi-kaevandamist?_ga=1.210516701.997560386.1466368422

08.06.2015	Postimees	Aleksander Laane: riigikogu kavandab kuritegu ökosüsteemi vastu	http://arvamus.postimees.ee/3217797/aleksander-laane-riigikogu-kavandab-kuritegu-okosusteemi-vastu?_ga=1.210516701.997560386.1466368422
16.06.2015	Postimees	Riigikogu võttis vastu põlevkivi tagantjärgi kaevandamist lubava seaduse	http://majandus24.postimees.ee/3226683/riigikogu-vottis-vastu-polevkivi-tagantjargi-kaevandamist-lubava-seaduse?_ga=1.137770360.997560386.1466368422
18.06.2015	Delfi	VKG paneb kaks õlivabrikut taas tööle	http://eestielu.delfi.ee/idavirumaa/elu/vkg-paneb-kaks-olivabrikut-taas-toole?id=71737083
18.06.2015	Delfi	Seadusemuudatuse kiire mõju: pool aastat tagasi koondanud VKG loob uusi töökohti	http://arileht.delfi.ee/news/uudised/seadusemuudatuse-kiire-moju-pool-aastat-tagasi-koondanud-vkg-loob-uusi-tookohti?id=71737633
17.08.2015	Postimees	Marek Strandberg: naftakiimast ja Maa kliimast	http://arvamus.postimees.ee/3296375/marek-strandberg-naftakiimast-ja-maa-kliimast?_ga=1.209600090.997560386.1466368422
21.08.2015	Delfi	Valitsus tõmbas varrukast üllatuseelnõu	http://arileht.delfi.ee/news/uudised/valitsus-tombas-varrukast-ullatuseelnou?id=72255445
02.09.2015	Delfi	Jõhvi volikogu astus Kose karjääri rajamise vastu	http://eestielu.delfi.ee/idavirumaa/elu/johvi-volikogu-astus-kose-karjaari-rajamise-vastu?id=72344353
18.09.2015	Delfi	Dmitri Dmitrijev: Laseme Ida-Virumaa inimestest tühjaks joosta?	http://epl.delfi.ee/news/arvamus/dmitri-dmitrijev-laseme-ida-virumaa-inimestest-tuhjaks-joosta?id=72487027
06.10.2015	Delfi	Hando Sutter: energeetikas on toimumas korraga kolm revolutsiooni	http://arileht.delfi.ee/news/uudised/hando-sutter-energeetikas-on-toimumas-korraga-kolm-revolutsiooni?id=72629591
16.10.2015	Delfi	Pomerants: fosforiidi kaevandamise võimalusi tuleb uurida	http://epl.delfi.ee/news/lp/pomerants-fosforiidi-kaevandamise-voimalusi-tuleb-uurida?id=72719071
24.10.2015	Delfi	Sotsiaalse katastroofiga ähvardanud suurtöösturid võtavad üle miljoni euro dividende	http://arileht.delfi.ee/news/uudised/sotsiaalse-katastroofiga-ahvardanud-suurtoosturid-votavad-ule-miljoni-euro-dividende?id=72771877
11.11.2015	Postimees	VKG avas põlevkivitöötlemise tehase Petroter III	http://majandus24.postimees.ee/3395853/vkg-avas-polevkivitootlemise-tehase-petroter-iii?_ga=1.209600090.997560386.1466368422
26.11.2015	Postimees	Raul Potisepp: kliimamuutuste tagajärjed võivad olla halvimal juhul katastroofilised	http://arvamus.postimees.ee/3414321/raul-potisepp-kliimamuutuste-tagajarjed-voivad-olla-halvimal-juhul-katastroofilised?_ga=1.234035798.997560386.1466368422

29.11.2015	Postimees	Tallinnas nõudsid meeleavaldajad kliimamuutuste peatamist	http://www.postimees.ee/3417379/tallinnas-noudsid-meeleavaldajad-kliimamuutuste-peatamist
05.12.2015	Postimees	Kaarel Tarand: põlevkivilõke kustub niikuinii	http://arvamus.postimees.ee/3423763/kaarel-tarand-polevkiviloke-kustub-niikuinii?_ga=1.166936182.997560386.1466368422
06.12.2015	Delfi	Rene Tammist: põlevkivisektori game over	http://arileht.delfi.ee/news/uudised/rene-tammist-polevkivisektori-game-over?id=73128523
11.12.2015	Postimees	Tarmo Soomere: 50 aastat hoiatusi, veel üks kliimakonverents	http://arvamus.postimees.ee/3431121/tarmo-soomere-50-aastat-hoiatusi-veel-uks-kliimakonverents?_ga=1.234035798.997560386.1466368422
14.12.2015	Delfi	Jüri Mõis: pikas perspektiivis tähendab Pariisi kliimalepe põlevkivienergeetika lõppu	http://arileht.delfi.ee/news/uudised/juri-mois-pikas-perspektiivis-tahendab-pariisi-kliimalepe-polevkivienergeetika-loppu?id=73196707
14.12.2015	Delfi	Marko Pomerants: põlevkivi kasutamine peab hakkama vähenema hiljemalt 15 aasta pärast	http://arileht.delfi.ee/news/uudised/marko-pomerants-polevkivi-kasutamine-peab-hakkama-vahenema-hiljemalt-15-aasta-parast?id=73196993
14.12.2015	Postimees	Juhtkiri: ajaloolise kliimaleppe sõnum	http://arvamus.postimees.ee/3434127/juhtkiri-ajaloolise-kliimaleppe-sonum?_ga=1.234035798.997560386.1466368422
14.12.2015	Postimees	Põlevkivielektri lõpp silmapiiril	http://pluss.postimees.ee/3435021/polevkivielektri-lopp-silmapiiril?_ga=1.235704649.997560386.1466368422
15.12.2015	Postimees	Rene Tammist: Eesti energiapoliitika kavad reedavad plaani saastet suurendada	http://arvamus.postimees.ee/3434965/rene-tammist-eesti-energiapoliitika-kavad-reedavad-plaani-saastet-suurendada?_ga=1.235812553.997560386.1466368422
15.12.2015	Postimees	Pariisi kliimalepe seab ohtu põlevkivitööstuse elujõu	http://majandus24.postimees.ee/3435885/pariisi-kliimalepe-seab-ohtu-polevkivitoostuse-elujou?_ga=1.235812553.997560386.1466368422
15.12.2015	Postimees	Timo Tatar: kliimaleppe mõjud Eesti energiapoliitikale	http://arvamus.postimees.ee/3436709/timo-tatar-kliimaleppe-mojud-eesti-energiapoliitikale?_ga=1.235812553.997560386.1466368422
16.12.2015	Postimees	Taavi Rõivas: Eesti on Pariisi kliimakokkulepetega juba arvestanud	http://arvamus.postimees.ee/3436361/taavi-roivas-eesti-on-pariisi-kliimakokkulepetega-juba-arvestanud?_ga=1.231544407.997560386.1466368422
17.12.2015	Delfi	Vennad Sõnajalad: tuulikutööstus võib Eestisse luua 1500 uut töökohta	http://maaleht.delfi.ee/news/maaleht/uudised/vennad-sonajalad-tuulikutoostus-voib-eestisse-luua-1500-uut-tookohta?id=73220043
17.12.2015	Delfi	VAATA, mis saab Eesti põlevkivist järgmise 15 aasta	http://arileht.delfi.ee/news/uudised/vaata-mis-saab-eesti-polevkivist-jargmise-15-aasta-jooksul?id=73228375

		jooksul	
30.12.2015	Delfi	1. jaanuarist muutuvad loodusvarade kasutusõiguse tasud	http://maaleht.delfi.ee/news/maaleht/uudised/1-jaanuarist-muutuvad-loodusvarade-kasutusoiguse-tasud?id=73318237
31.12.2015	Delfi	Põlevkivitööstuse väljakutse: põletusseadmete nõuded karmistuvad homsest	http://arileht.delfi.ee/news/uudised/polevkivitoostuse-valjakutse-poletusseadmete-nouded-karmistuvad-homsest?id=73325917
08.01.2016	Postimees	Riik ja valitsus pälvisid kliimapoliitika eest keskkonnakirve	http://www.postimees.ee/3460951/riik-ja-valitsus-palvisid-kliimapoliitika-eest-keskkonnakirve
15.01.2016	Postimees	Ossinovski: riik aitab töö kaotanuid	http://majandus24.postimees.ee/3469691/ossinovski-riik-aitab-too-kaotanuid?_ga=1.239427147.997560386.1466368422
15.01.2016	Delfi	Michal VKG koondamisest: praeguse nafta hinnaga ei ole reaalne põlevkivisektorist tasusid nõuda	http://arileht.delfi.ee/news/uudised/michal-vkg-koondamisest-praeguse-nafta-hinnaga-ei-ole-reaalne-polevkivisektorist-tasusid-nouda?id=73433035
15.01.2016	Postimees	Valitsus tahab taas lubada puidu massilist katlasse kühveldamist	http://majandus24.postimees.ee/3470239/valitsus-tahab-taas-lubada-puidu-massilist-katlasse-kuhveldamist?_ga=1.239427147.997560386.1466368422
18.01.2016	Delfi	VKG suuromanik pärast 500 inimese koondamist: 24 kuud suudame veel elus püsida	http://arileht.delfi.ee/news/uudised/vkg-suuromanik-parast-500-inimese-koondamist-24-kuud-suudame-veel-elus-pusida?id=73444859
26.01.2015	Postimees	VKG soovib ressursi- ja saastetasude ajutist kaotamist	http://majandus24.postimees.ee/3482597/vkg-soovib-ressursi-ja-saastetasude-ajutist-kaotamist?_ga=1.239427147.997560386.1466368422
26.01.2015	Postimees	Hando Sutter: puidu põletamisest Narva elektrijaamades – mida siis ikkagi otsustati?	http://arvamus.postimees.ee/3481821/hando-sutter-puidu-poletamisest-narva-elektrijaamades-mida-siis-ikkagi-otsustati?_ga=1.242947786.997560386.1466368422
27.01.2016	Postimees	Eestimaa Looduse Fond: neli väärväidet metsadest elektri tootmise teemal	http://arvamus.postimees.ee/3483349/eestimaa-looduse-fond-neli-vaarvaidet-metsadest-elektri-tootmise-teemal?_ga=1.242947786.997560386.1466368422
29.01.2016	Delfi	Riigikontroll: Michali plaan Ida-Virumaa olukorda ei lahenda	http://epl.delfi.ee/news/eesti/riigikontroll-michali-plaan-ida-virumaa-olukorda-ei-lahenda?id=73540177
04.02.2016	Postimees	Aleksander Laane: jagame Eesti Energia kaheks	http://arvamus.postimees.ee/3563157/aleksander-laane-jagame-eesti-energia-kaheks?_ga=1.242947786.997560386.1466368422
23.02.2016	Postimees	Keemiatööstuste liit toetab	http://majandus24.postimees.ee/3594097/keemiatoostuste-liit-toetab-ressursitasu-sidumist-nafta-

		ressursitasu sidumist nafta hinnaga	hinnaga?_ga=1.243480013.997560386.1466368422
02.03.2016	Delfi	Alar Karis: valitsuse võimsate Ida-Viru päästeplaanide ootuses	http://arileht.delfi.ee/news/uudised/alar-karis-valitsuse-voimsate-ida-viru-paasteplaanide-ootuses?id=73842303
03.03.2016	Postimees	Valitsus vähendab ajutiselt põlevkivitööstuse tasusid	http://majandus24.postimees.ee/3605183/valitsus-vahendab-ajutiselt-polevkivitoostuse-tasusid?_ga=1.235041353.997560386.1466368422
03.03.2016	Postimees	Eesti Energia: valitsuse otsus aitab keerulise aja üle elada	http://majandus24.postimees.ee/3605419/eesti-energia-valitsuse-otsus-aitab-keerulise-aja-ule-elada?_ga=1.235041353.997560386.1466368422
04.03.2016	Postimees	Põlevkivitöösturid kiidavad ressursitasude alandamist	http://majandus24.postimees.ee/3605637/polevkivitoosturid-kiidavad-ressursitasude-alandamist?_ga=1.235041353.997560386.1466368422
04.03.2016	Postimees	Pomerants: ressursitasude alandamine vähendab keskkonnainvesteeringuid	http://majandus24.postimees.ee/3606899/pomerants-ressursitasude-alandamine-vahendab-keskkonnainvesteeringuid?_ga=1.235041353.997560386.1466368422
11.03.2016	Postimees	Andrus Karnau: põlevkivitööstus – pankrotti laskmiseks lihtsalt liiga suur	http://arvamus.postimees.ee/3614217/andrus-karnau-polevkivitoostus-pankrotti-laskmiseks-lihtsalt-liiga-suur?_ga=1.235041353.997560386.1466368422
16.03.2016	Postimees	Ministeerium esitas põlevkivisektori abipaketi kooskõlastusringile	http://majandus24.postimees.ee/3621355/ministeerium-esitas-polevkivisektori-abipaketi-kooskolastusringile?_ga=1.206402011.997560386.1466368422
18.03.2016	Delfi	Eesti peaks valmistuma hoopis põlevkivienergeetika lõpuks	http://epl.delfi.ee/news/arvamus/eesti-peaks-valmistuma-hoopis-polevkivienergeetika-lopuks?id=73975017
12.04.2016	Postimees	Lendorava kaitset nõudvale märgukirjale on antud üle 1200 allkirja	http://ilmajaam.postimees.ee/3653419/lendorava-kaitset-noudvale-margukirjale-on-antud-ule-1200-allkirja?_ga=1.206402011.997560386.1466368422
15.04.2016	Delfi	Keskkonnaühendused: keskkonnatasude järsk langetamine on vastuolus seadustega	http://arileht.delfi.ee/news/uudised/keskkonnauhendused-keskkonnatasude-jarsk-langetamine-on-vastuolus-seadustega?id=74245943
19.04.2016	Postimees	Keemiatöösturite vastulause keskkonnaühendustele: ei tasu hammustada kätt, mis toidab	http://majandus24.postimees.ee/3661459/keemiatoosturite-vastulause-keskkonnauhendustele-ei-tasu-hammustada-katt-mis-toidab?_ga=1.167927529.997560386.1466368422
21.04.2016	Postimees	Eesti Energia hakkab põlevkivituhast tehtud väetist müüma	http://majandus24.postimees.ee/3664167/eesti-energia-hakkab-polevkivituhast-tehtud-vaetist-muuma?_ga=1.172719595.997560386.1466368422
18.05.2016	Postimees	Energiafirmad: lendorava elupaigad toovad riigile 112,2	http://majandus24.postimees.ee/3698669/energiafirmad-lendorava-elupaigad-toovad-riigile-112-2-

		miljonit kahju	miljonit-kahju?_ga=1.172719595.997560386.1466368422
18.05.2016	Postimees	Lendorava elupaikade laiendamine pahandab põlevkivikaevandusi	http://pluss.postimees.ee/3699569/lendorava-elupaikade-laiendamine-pahandab-polevkivikaevandusi?_ga=1.198057319.997560386.1466368422
29.05.2016	Postimees	Ahti Asmann: plaanimajandus energeetikas	http://arvamus.postimees.ee/3711131/ahti-asmann-plaanimajandus-energeetikas?_ga=1.198057319.997560386.1466368422
16.06.2016	Postimees	Eesti pani paika kliimapoliitika: põlevkivi põletamine on 2030. aastaks mõttetu	http://tehnika.postimees.ee/3734849/eesti-pani-paika-kliimapoliitika-polevkivi-poletamine-on-2030-aastaks-mottetu?_ga=1.198057319.997560386.1466368422
20.06.2016	Postimees	Eesti Energia suurendab kuni 300 miljoni euro eest efektiivsust	http://majandus24.postimees.ee/3738681/eesti-energia-suurendab-kuni-300-miljoni-euro-eest-efektiivsust?_ga=1.198057319.997560386.1466368422
21.06.2016	Postimees	Ministeerium loob põlevkivi kasutamise säilitamiseks töörühma	http://majandus24.postimees.ee/3739711/ministeerium-loob-polevkivi-kasutamise-sailitamiseks-tooruhma?_ga=1.198057319.997560386.1466368422
01.07.2016	Postimees	Andrus Karnau: Eesti Energia lubab teenida rohkem raha kui kunagi varem	http://arvamus.postimees.ee/3749179/andrus-karnau-eesti-energia-lubab-teenida-rohkem-raha-kui-kunagi-varem?_ga=1.268268742.997560386.1466368422
07.07.2016	Postimees	Viru Keemia Grupp võtab uuesti tööle 350 inimest	http://majandus24.postimees.ee/3756617/viru-keemia-grupp-votab-uuesti-toole-350-inimest?_ga=1.268268742.997560386.1466368422
16.08.2016	Delfi	Eesti kliimaplaan: põlevkivitööstus saab hapniku, naabrid CO2-e	http://epl.delfi.ee/news/eesti/eesti-kliimaplaan-polevkivitoostus-saab-hapniku-naabrid-co2-e?id=75343369
20.09.2016	Postimees	Rõivas: põlevkivielekter on taganud Eestile energiasõltumatuse	http://majandus24.postimees.ee/3844205/roivas-polevkivielekter-on-taganud-eestile-energiasoltumatuse?_ga=1.268268742.997560386.1466368422
22.09.2016	Postimees	Eesti Energia kulutab Utah's ligi miljon eurot aastas	http://majandus24.postimees.ee/3845473/eesti-energia-kulutab-utah-s-ligi-miljon-eurot-aastas?_ga=1.234625494.997560386.1466368422
06.10.2016	Postimees	Riik soovib põlevkivisektorit muuta tõhusamaks	http://majandus24.postimees.ee/3862785/riik-soovib-polevkivisektorit-muuta-tohusamaks?_ga=1.206387675.997560386.1466368422

Appendix E. List of documents, secondary literature and statistical databases

1. Eesti Energia Aastaaruanne 2004/05
2. Eesti Energia Aastaaruanne 2005/06
3. Eesti Energia Aastaaruanne 2006/07
4. Eesti Energia Aastaaruanne 2007/08
5. Eesti Energia Aastaaruanne 2008/09
6. Eesti Energia Aastaaruanne 2009/10
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11. Eesti Energia Aastaaruanne 2014
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13. Eesti Energia Sotsiaalse vastutuse ning säästva arengu aruanne 2013
14. Eesti Energia Sotsiaalse vastutuse ja säästva arengu aruanne 2014
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52. VKG Aastaraamat 2015
53. VKG Sotsiaalse vastutuse ning säästva arengu aruanne 2008-09
54. VKG Sotsiaalse vastutuse ning säästva arengu aruanne 2010
55. VKG Sotsiaalse vastutuse ning säästva arengu aruanne 2011
56. VKG Sotsiaalse vastutuse ning säästva arengu aruanne 2012
57. VKG Sotsiaalse vastutuse ja säästva arengu aruanne 2013
58. VKG Sotsiaalse vastutuse ja säästva arengu aruanne 2014

Kokkuvõte

Globaalne kliimamuutus kujutab tõsist ohtu tänapäeva ühiskonnakorralduse jätkusuutlikkusele ning selle negatiivsete mõjude ärahoidmine või leevendamine nõuab otsustavat sekkumist. Ühelt poolt on tegu tehnoloogiaküsimusega, kuna suur osa vastutusest lasub mittejätkusuutlikel tööstusharudel, mis põhinevad fossiilkütuste kasutamisel. Samas hõlmab keskkonnaprobleemide lahendamine ka radikaalseid ühiskondlikke muutusi probleemi teadvustamises, poliitilistes eesmärkide seadmises ja regulatsioonide rakendamises, tarbijakäitumises ning kultuurilistes arusaamades ja väärtustes.

Käesolevas magistritöös pealkirjaga "Mis takistab energiasiirdeid? Kliimamuutuse mõju Eesti põlevkivitööstuse destabiliseerumisele" uuritakse seoseid kliimamuutuse poolt põhjustatud sotsiaalse, poliitilise ja majandusliku surve ning Eesti põlevkivitööstuse muutumise vahel aastatel 1995-2016. Varasemad teadustööd on leidnud, et välissurve suurenemine viib reeglina tööstuse destabiliseerumiseni, mis toob kaasa radikaalsed muutused nagu ümberorienteerumine uutele turgudele või traditsiooniliste tööstuse asendumine uue ja innovatiivse tööstusharuga. Eesti põlevkivitööstuse juhtum võimaldab uurida tähelepanuta jäänud küsimust, mil määral mängib selles protsessis rolli kohalik geograafiline kontekst. Töö eesmärgiks on seega vastata kahele peamisele uurimisküsimusele:

1. millistel viisidel on Eesti põlevkivitööstus seotud kohaliku piirkonnaga?
2. milline on kliimamuutuse poolt põhjustatud välissurve ja kohaliku piirkonna koosmõju põlevkivitööstuse destabiliseerumisele aastatel 1995-2016?

Uurimisküsimustele vastamiseks on läbi viidud kvalitatiivne juhtumiuuring, mis põhineb järgmistel allikmaterjalidel: a) suuremate päevalehtede veebiarhiivid (Delfi ja Postimees), b) avalikud dokumendid (ettevõtete aastaraamatud ja -aruanded, riiklikud arengukavad), c) sekundaarkirjandus, d) statistikaandmebaasid. Töö tulemustest selgub, et kliimamuutuse mõju põlevkivitööstuse destabiliseerumisele on takistanud 1) tööstuse sotsiaalne ja territoriaalne seotus Ida-Virumaa piirkonnaga, mistõttu energiajulgeoleku ja tööhõive küsimused on olnud prioriteetsemad kui keskkonnaprobleemid ja 2) sidemed tööstuse ja poliitikute vahel, mis väljenduvad regulaarselt tööstuse huvides olevate poliitikate vastuvõtmises. Juhtumiuuringu alusel võib järeldada, et jätkusuutliku arengu saavutamine eeldab muu hulgas tööstuse ja kohaliku piirkonna vaheliste sidemete ümberkujundamist, mis on aluseks nii töösturite ja poliitikute kui ka laiema avalikkuse ühisele arusaamale tööstuse piirkondlikust rollist. Selleks on mitmeid viise, alates laiapõhjalise diskussiooni algatamisest

selliste probleemide tähenduste üle, mida oleme seni võtnud iseenesestmõistetavalt (näiteks energiajulgeolek) ning lõpetades nii riiklike kui ka regionaalsete arengukavade põhjaliku ümbervaatamisega. Teoreetiliselt on aeg selleks küps just nüüd, kuna Pariisi kliimakokkulepe, toornafta hinna langus maailmaturul ja taastuvenergiatehnoloogiate konkurentsivõime kasv seavad põlevkivitööstuse tõsise surve alla, kuid loovad ka soodsad tingimused alternatiivseteks arenguteedeks.

Lihtlitsents lõputöö reprodutseerimiseks ja lõputöö üldsusele kättesaadavaks tegemiseks

Mina, Silver Sillak (sünnikuupäev: 08.04.1991),

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Tartus, 29.05.2017