

The Chilean energy “transition”: between successful policy and the assimilation of a post-political energy condition

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The Chilean energy transition has been internationally recognized as a case of successful public policy in the promotion of renewable energies, even being defined as an “energy revolution”. However, a preliminary analysis of the process allow us to sustain that the incorporation of non-conventional renewable sources to the energy matrix has not modified the technocratic model of market-based management, the ownership structure of the projects, nor has it implied an advance towards democratic and decentralized energy systems that promote local development and the effective participation of communities in energy decision-making. It is concluded that the socio-technical process of the Chilean energy transition has given rise to a post-political energy condition, and that behind the technological success and consensus around the transition there is a perpetuation of power relations and structures of capitalist appropriation and management of energy resources.

Keywords: Energy policy; energy transition; Chile; depoliticization; non conventional renewable energies

1. Introduction

Chile is characterized by being an energy importer, highly dependent on hydropower and external energy sources, with limited fossil energy sources and a highly centralized and privatized energy system (CNE 2008; Min. Energía 2014; Proaño 2015; Furnaro 2019; Simsek et al. 2019; O’Ryan, Nasirov, and Álvarez 2020). The multiple problems that this has caused in the country, together with the consensus, discourses and international agreements on the effects of climate change, have allowed the energy discussion to be positioned as a central axis of the public policies of recent governments, which has implied an apparent “re-politicization” of energy as an issue area. This has been reflected in the promotion of long-term measures to encourage the incorporation of generation sources based on non-conventional renewable energies (NCRE)¹ in the energy matrix with the intention of exploiting the country’s renewable energy potential (Min. Energy 2014, 2016; Government of Chile 2015; Nasirov et al. 2018, 2019; Pacheco 2018; Simsek et al. 2019). Preliminary figures show that the regulations and public policies promoted have been successful, since they show a constant and exponential increase in the participation of this type of sources in the electricity matrix (especially solar and wind) in the short and medium

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term (REN21 2016; Nasirov et al. 2018; Pacheco 2018; CNE 2020a, 2020b). This has led to the Chilean case being presented in the international scenario as an example to follow in terms of the promotion of renewable energies by the State and its public policies.² Former Energy Minister Máximo Pacheco has even argued that what has happened since 2014 with the implementation of energy policies and regulations represents a true “energy revolution” (Pacheco 2018).

However, behind the consensus on the need to modify traditional patterns -associated with an energy matrix based on fossil sources that incorporate renewables-, is the fact that the so-called Chilean energy transition has not meant a real decrease in the participation of fossil fuels in the electrical and primary matrix, a reduction in GHG emissions, nor a substantial modification in terms of the characteristic features that make up the socio-political context of a concentrated, centralized and scarcely participatory and inclusive energy system. Then it is necessary to question why a transition process that is presented as revolutionary has failed to allow the promotion of new energy paradigms more democratic and decentralized and move towards a true transformation of the energy sector.

Recent studies on the process of Chilean energy transition promoted since 2014 have focused mostly on the analysis of the conditions to explain and maintain the future growth of renewable energies (Nasirov et al. 2018, 2019; Simsek et al. 2019), the projections and patterns of GHG emissions from the energy sector for meeting mitigation targets (O’Ryan et al. 2019, 2020; Osorio-Aravena et al. 2020), or the role that demand side management could play within the transition (Valdés et al. 2019). These studies adopt a mainly technocratic approach by analyzing the stimulus policies and market-based mechanisms that explain the advance towards a lower emission energy matrix, but without addressing a crucial aspect in energy transitions such as power and the power relations that underlie and determine these processes. In parallel to these trends, research has emerged that has sought to reveal the shortcomings of the supposed participatory approach or participatory turn in the context of the new public energy policy (Ureta 2017; Alvia-Palavicino and Opazo-Bunster 2018; Urquiza et al. 2018), and its neoliberal character and functional to the reproduction of the regimes of accumulation in the mining sector (Furnaro 2019).

The development of further research that feeds the critical study on the processes of energy transition and its results is crucial for its proper understanding if we consider that these are fundamentally political processes that not only involve changes in energy infrastructure systems, but also in the social sphere, specifically over the power relations that configure the socio-technical order relative to the energy sector (Avelino and Rotmans 2009; Meadowcroft 2009; Mitchell 2011; Laird 2013; Boyer 2014; Szeman 2014; Avelino et al. 2016; Bues and Gailing 2016; Gailing 2016). On this basis, during the last years the studies linked to the processes of energy transition have advanced in the theorization of the role of power relations in the configuration of the varied dimensions of the energy resources, which used to be treated from a predominantly technical focus (Avelino and Rotmans 2009; Hendriks 2009; Meadowcroft 2009; Avelino et al. 2016; Avelino and Wittmayer 2016; Gailing 2016; Kenis, Bono, and Mathijs 2016; Healy and Barry 2017; Burke and Stephens 2018). This has allowed progress towards a deeper understanding of the relationship between society and energy, generating more critical analyses of the existence of disparate patterns of use and access among different social stakeholders. To this end, conceptual approaches such as depoliticization (Bues and Gailing 2016; Kenis, Bono, and Mathijs 2016; Kuzemko 2016), studies of governability (Bues and Gailing 2016; Gailing 2016) and dispositive thinking (Gailing 2016), among other theoretical and methodological frameworks have been incorporated into the study of energy transition processes.

On this basis, the objective of this paper is to contribute to the study of power dynamics in the context of the Chilean energy transition based on the theoretical development linked to the concept of depoliticization. This, in order to explain how the incorporation of the energy thematic as central theme of public policy, has contradictorily gone hand in hand with the perpetuation of a depoliticized framework and a neoliberal energy model oriented in the market, sustained in the consensus and discourse of the advance of renewable energies. For this purpose, a methodological framework is elaborated based on the investigations that have used the concept of depoliticization for the study of the transition processes.

Mainly, research on depoliticization has been used in general as a framework of analysis to explain the causes and effects of the prevalence of neoliberal thinking in domestic politics (Burnham 2000; Silva 2004, 2006; Hay 2007; Jenkins 2011; Wood and Flinders 2014). Subsequent developments have begun to employ this approach to investigate energy issues specifically. For example by Bues and Gailing (2016) to study cases of implementation of the German *Energiwende*, by Kenis, Bono, and Mathijs (2016) to elucidate the post-political character of the “Transition Mangement” approach in the Belgian and Dutch context and by Kuzemko (2014, 2016) for the UK case study. The concept of depoliticization offers a valuable approach for the critical study of energy transitions, as it focuses on the dynamics of political decision-making by analyzing the logics and strategies of inclusion and/or exclusion of certain actors, interests and perspectives in the debate on the definition and implementation of possible energy futures.

After this introduction, the following section outlines the concept of depoliticization and the related approaches that have been developed to study power relations within the context of energy transitions. This in order to propose a methodological framework to analyze the Chilean case. Next, both the process of the Chilean energy system prior to the start of the energy transition, as well as public policies and the central elements that characterize the process of the so-called transition or Chilean revolution, are analyzed based on the forms or faces of depoliticization identified. After a section of discussion from the central findings, by way of conclusion the article shows the contribution that the theoretical approaches exposed to the analysis and conceptualization of the process of Chilean energy transition.

2. Politization, depoliticization and the post-Political condition of energy

Energy transitions do not only involve changes in technological features and infrastructure of energy systems, but also in the social sphere, specifically over the power relations that configure the socio-technical order relative to the energy sector, which are decisive determinants within these processes. Energy transitions are inherently political processes that can transform social and cultural relations and structures and constitute a possibility of advancing towards more democratic models of energy development, but that can also reflect and reinforce existing power relations (Avelino and Rotmans 2009; Meadowcroft 2009; Mitchell 2011; Stirling 2014; Avelino et al. 2016; Brand 2016; Bues and Gailing 2016; Gailing 2016; Burke and Stephens 2018; Köhler et al. 2019; Brand, Görg, and Wissen 2020).

The need to re-politicize the analysis of socio technical and energy transitions is contingent, since parallel to the incorporation of the problems associated with climate change and its consequences into the sphere of public policies, a political condition has been consolidated evacuating the debate on these matters from the space of public discussion, replacing it with a framework of expert consensualism reserved for political-intellectual elites (Swyngedouw 2010). This process of de-politicization of environmental issues has

given rise to the structuring of a post-political condition, where ideological disputes and struggles are replaced by techno-management planning, expert management and intermediation of interests (Zizek 1999, 2008; Mouffe 2000, 2005; Rancière 2006; Swyngedouw 2010). Depoliticization is thus the mechanism for the annulment of politics and the tendency to promote thinking focused on consensus and a technical and managerial way of looking at politics (Kenis and Lievens 2014; Kenis, Bono, and Mathijs 2016). This, ignoring the fact that all consensuses are the temporary result of a provisional hegemony, which in itself implies dynamics of exclusion (Mouffe 2000, 2013).

This post-political framework, is structured around the dominant perception of the inevitability of capitalism and the market economy as the basic organizational structure of society, that will allow dealing with the socio-environmental crisis through privatization and commodification of CO₂, carbon-trading and emission-offsetting (Swyngedouw 2010).³ This ambivalence of the apparent processes of politicization behind which are hidden mechanisms of depoliticization strengthening a post-political condition is based on the distinction between the concepts of “the political” and “politics”. Politics refers to the institutionalist or social spaces that we usually associate with the development of the activities of exercise of political power as the parliament, elections, or municipalities. On the other hand, the concept of “the political” refers to the recognition and visibility of the existence of conflict, power, antagonism and opposition that is typical of any decision-making process (Mouffe 2005, 2013).

In the Chilean context, the approaches to depoliticization have been developed by Patricio Silva, who describes the project of depoliticization of society initiated by the military government (1973–1990) and continued by the governments of the Concertación (1990–2010) in order to maintain political stability and facilitate the process of national reconciliation (Silva 1991, 2004, 2006, 2008, 2011). For this author the Chilean case is unique in Latin America because of the conscious and tenacious way in which the objective of political deactivation was pursued through the application of orthodox neo-liberal policies and the primacy of the technocratic and market approach. The integration of the technocratic ideology within the democratic idea in Chile, has allowed the maintenance of this condition in democratic governments. This mix has formed a growing “technocratic democracy” in which social problems are translated into technical terms, making depoliticization a central feature of the Chilean model (Silva 2006).

Bues and Gailing (2016) have used the concept of depoliticization to analyze the empirical case of renewable energy production in the German state of Brandenburg.⁴ These authors indicate that the concept offers an approach to analyze the openness of the discussion regarding the definition of the direction of the transitions. They indicate that as they are politicized processes they should be shaped by discussion and deliberation on the possible features of the transition process and its outcomes, being at stake the extension or limitation of the scope of the possible (Bues and Gailing 2016, 78, 90). They add that the study of depoliticization offers ground on which an agency-based conceptualization of power can be operationalized for the study of power shift in energy transition (Bues and Gailing 2016, 79). For their study they refer to the following types of depoliticization elaborated by Wood and Flinders (2014) from the categories of Hay (2007): a) Governmental depoliticization (or delegation); b) Societal depoliticization (privatization); and c) Discursive depoliticization (or denial) (Bues and Gailing 2016, 77).

In short, governmental depoliticization involves dynamics in which governmental public policy issues are left to public-private structures or technical bodies, limiting public scrutiny of their decisions. Societal depoliticization is linked to the transfer of issues from the public sphere directly to the private sphere and logic. Discursive

depoliticization marks the shift of issues from the public sphere to the “realm of necessity”, making human agency illusory as in the case of the discourse on the imperative of energy transition (Bues and Gailing 2016, 77). In their study on the German energy transition they point to the technocratic decisions taken by regional planning agencies in the definition of wind turbine sites as an example of the first form of depoliticization (governmental). As an example of the second form of depoliticization (societal), the decision on investments and the use of energy projects is based on investments, owners and private interests. On the other hand, as an example of the third form of depoliticization (discursive/denial) is presented the imposition of the discourse of the need to advance in the energy transition without further discussion or debate on the different patterns of development that it should follow. To these categories is added a face of depoliticization defined as “repoliticization” that concerns the actions of resistance carried out by the citizenship against the imposed energy projects and logics (eg: local action groups against wind energy development, energy cooperatives; political pressure on regional planning) (Bues and Gailing 2016, 89).

In his turn, Kuzemko (2016) applies the depoliticization approach to the study of energy and climate change policies in the United Kingdom, differentiating between three forms of depoliticization in terms equivalent to those proposed by Bues and Gailing. Based on the work of Kay, he proposes the following types or forms of depoliticization: a) marketized depoliticization; b) technocratic depoliticization; and c) non-deliberative depoliticization. By marketized depoliticization they mean the delivery of public affairs by the state to the private sector and the market on similar terms to the societal depoliticization of Wood and Flinders (2014) (Kuzemko 2016, 110). Technocratic depoliticization, in terms similar to the governmental depoliticization of Wood and Flinders (2014), refers to the transfer of matters pertaining to formal political deliberation to quasi-public bodies or independent technical or expert bodies (Kuzemko 2016, 112). Non-deliberative depoliticization refers to “a lack of open and informed debate and deliberation within and between actor groups which, in turn, serves to shape and constrain choices” (Kuzemko 2016, 113). This type of depoliticization is assimilated to the discursive depoliticization of Wood and Flinders (2014).

The privatization process in the British electricity market, exemplifies the first type of depoliticization. As a consequence of this process, it is argued that investment in new electricity infrastructure, energy security and climate change mitigation measures became dependent on vertically integrated oligopolistic economic groups, restricting the government’s ability to implement new or alternative energy policies (Kuzemko 2016, 113–116). The technocratic depoliticization is reflected in the delivery of energy decisions to independent and technical bodies such as the Office of Gas and Electricity Markets, which sees its capacity for action built to the necessary approval of industry representatives (Kuzemko 2016, 116–118). Finally, as an example of non-deliberate depoliticization, it indicates the reductionism of the energy discussion to a technocratic vision on economic and market variables as a result of the state’s role as a mere regulator of privatized services.

For its part, the work of Kenis, Bono, and Mathijs (2016) critically analyzes the approach to transition management prevailing in the Dutch and Belgian context. The authors refer to this approach as a “new and promising way to facilitate the transition to a more sustainable society” (Kenis, Bono, and Mathijs 2016, 568) denouncing its post-political character despite its supposedly radical tone (more information on the Transitions Management framework in Rotmans, Kemp, and Van Asselt 2001; Loorbach et al. 2010; Köhler et al. 2019). They denounce the dynamics of decision-making in this context, which is based on a process of dialogue between pre-selected actors that seeks

to generate an image of consensus on a common future defined and limited *ex ante*. Their analysis is based on five considerations: a) “the openness of transition process”, where they question the preposition of a pre-defined and delimited vision of the common good that will lead to the adoption of a consensus by making radical dissent invisible and excluded (Kenis, Bono, and Mathijs 2016, 574–575); b) “the place of the conflict”, which makes explicit the economic and depoliticized meaning that this approach makes of the conflict by using it as a mere trigger for innovative transition initiatives (Kenis, Bono, and Mathijs 2016, 576); c) “the limits of deliberation”, exposing the tendency to ignore and hide the power relations of the different actors within the deliberative process behind the concept of interest or common good (Kenis, Bono, and Mathijs 2016, 576–577); d) “the problem of representation”, linked to the definition of the type of actors who take part in the process of defining the transition, which focuses on actors with “knowledge” and a predefined vision of the common good to the detriment of “common citizens”, and; e) “a (quasi-) market character of the model”, where it is criticized that the discussion on the transition is circumscribed to the logics of the free market model and the ways to orient the market dynamics towards social goals through subsidies, taxes or other types of stimuli (Kenis, Bono, and Mathijs 2016, 579–581).

These methodological frameworks used in the comparative literature to evaluate the transition processes constitute a basis on which it is possible to analyze the case of the Chilean energy transition. In first term, as much the previous scenario as that derived from the implementation of the transition process⁵ will be evaluated in the light of the categories or types of depoliticization used by Bues and Gailing (2016) and Kuzemko (2016) adopting mainly the denominations of this last author, that is to say: (a) marketized depoliticization (privatization); (b) technocratic depoliticization (delegation); and (c) non-deliberative depoliticization (denial). To broaden the focus, the last class of depoliticization incorporates the five critical considerations used by Kenis, Bono, and Mathijs (2016) to analyze non-deliberative depoliticization, especially with regard to the public policy that forms the basis of the Chilean energy transition, such as Energy Policy 2050.

It is necessary to indicate that for the purposes of this work it is understood that the Chilean energy transition begins in 2014 during the second government of President Michelle Bachelet. It is in this government where the energy issue becomes a central theme of public policy and where the short, medium and long-term measures that seek to reform the energy system are made explicit. This approach begins to be outlined in the 2014–2018 energy agenda and is embodied in the Energy Roadmap and Energy Policy 2050 of 2015, which set the tone for the development of regulations and subsequent public policies. The analysis is based on the study of secondary information sources, mainly official documents such as policies and reports from public entities and laws, as well as documentation, reports from public-private entities and NGOs linked to energy issues in Chile and the literature associated with the Chilean energy transition.

3. Assimilating the energy sector and the Chilean energy transition from the depoliticization approach

3.1. The basis of marketized Despoliticization: the privatization of the energy sector and its subsequent make-up

The current organic regulation of the energy sector dates back to the time of the military dictatorship and is part of the neoliberal economic reform program established under that regime, which covered the entire spectrum of economic policy by reducing the role

of the state in society and the economy (Bauer 2002, 2004; Silva 2004, 2006; Harvey 2007; Budds 2009; Tecklin, Bauer, and Prieto 2011; Gárate 2012; Prieto and Bauer 2012; Tironi and Barandiarán 2014). This vision was enshrined in the Decree with Force of Law (DFL) No. 4 of 1982 “General Law of Electrical Services” (LGSE).⁶ The fundamental principles of this law were: (i) the safe and cost-efficient operation of the electricity system, and; (ii) the existence of a competitive market in the field of generation-transmission and a price market in the field of distribution (CNE 2017). The energy policy implemented by the military regime gave the State a subsidiary role⁷ and encouraged the privatization of the electricity sector, which before the dictatorship was largely controlled by the State (Bauer 2010; Min. Energia 2017).⁸

The LGSE distinguished three segments of the “electricity market”: generation, transmission and distribution. In the electricity generation sector, a competitive market would operate with freely negotiated prices for non-regulated customers and regulated tariffs for “regulated customers”.⁹ On the other hand, the transmission and distribution sectors would operate under a natural monopoly system handed over to private operation (Fischer and Serra 2004; CNE 2017). In this way, the decision of where, how and when to carry out energy projects was left in the hands of private actors, with the State playing a role of supervision, referential planning of investments, and analysis and calculation of prices and tariffs (Min. Energia 2014; Proaño 2015).¹⁰

Geographically and operationally, the national energy system was divided into four separate subsystems. In November 2017 the two main subsystems Northern Interconnected System (SING) and Central Interconnected System (SIC) were interconnected forming the National Electric System (SEN) which today represents 99.3% of the total installed capacity (CNE 2018a). These systems have historically been highly concentrated, which was to be expected for the transmission and distribution segments operating under natural monopoly. In the generation segment, which supposedly operates as an open and competitive market, in 2010, the companies Endesa (currently ENEL), Colbún and Gener generated and marketed 84% of SIC’s energy, while E-CL, Gas Atacama and Gener generated and marketed more than 94% of SING’s energy.¹¹

Between 2008 and 2014, several laws were enacted to diversify the energy matrix by establishing quotas for the injection of non-conventional renewable energy (Law No. 20.257/2008, Law No. 20.689/2013), energy block bidding systems that would encourage the entry of new players into the market and the lowering of energy prices (Law No. 20.018/2005) and the possibility for users to generate their own energy and inject it into the grid (Law No. 20.571/2012).¹² These laws were successful in terms of promoting the increase of NCRE in the electricity matrix, but failed in their objective of promoting a decrease in prices, distributed generation and modifying the oligopolistic structure of the sector. Thus, the representation of NCRE in the installed electricity capacity increased from 2% in 2007–5.9% in 2013 (CEN 2014; CNE 2018a, 2018b). In the primary energy matrix, its representation increased from 0.013% in 2008–0.1% in 2013, with the prevalence of fossil sources remaining close to 70%. By 2014 the three largest electricity generation (Colbún, Endesa & AES Gener) and related companies accounted for 76% of the installed capacity in SIC while in SING it reaches 98% (Fabra, Montero, and Reguant 2014; CNE 2017).

Under these conditions and in the face of growing conflict and judicialization of hydro-electric and thermoelectric energy projects (Agostini, Silva, and Nasirov 2017; INDH 2018), the then presidential candidate Michelle Bachelet presents her government programme in October 2013. The program proposes to give the State a more active role in the energy field in order to “aspire to a safe and efficient economic development, with

reasonable prices, that takes advantage of our renewable resources in a sustainable and non-polluting way” (Bachelet 2013, 46). Once Michelle Bachelet was for second time elected President of Chile, and in fulfillment of the promise, in May 2014 the Ministry of Energy delivered the document “Energy Agenda: A Country Challenge, Progress for All”. This document established the priority measures and short/medium term energy focus (2014–2018). The Agenda constituted the first of three steps for the formulation of the “Energy 2050 Long-Term Energy Policy” which would be followed by the elaboration of the “Roadmap 2050” and the Energy Policy itself (Min. Energia 2015, 22).

On December 30, 2015, the President Bachelet received the document “Energy 2050: Chile’s Energy Policy” from the Minister of Energy, Máximo Pacheco. The main objective of the Policy 2050 was to achieve and maintain the reliability of the entire energy system, while meeting sustainability and inclusion criteria and contributing to the competitiveness of the country’s economy. In short, by means of these attributes, it is established as an objective to advance towards a sustainable energy in all its dimensions (Min. Energia 2016, 12). The essential pillar of this policy was the private initiative as an engine of energy development and a State fulfilled an articulating role of the process as guarantor of the common good (Min. Energia 2016, 36). Also, it was stated that it was necessary to have prices that favored the sector’s competitiveness by advancing to a reliable and safe centralized production. It was also declared the intention that consumers should adopt an active role within a more decentralized and bidirectional energy system that would approach levels of distributed generation and demand management similar to the other OECD countries (Min. Energia 2016, 14).

The objectives defined in the new energy policy were the basis for promoting a series of regulations that, as in the past, sought to stimulate the incorporation of NCRE, lower energy prices and greater competitiveness in the energy sector. The above, mainly through the implementation of green taxes (Law No. 20,780/2014), reform the electricity supply bidding system (Law No. 20,805/2015) and extending the National Petroleum Company’s (ENAP) business to energy generation activities (Law No. 20,897/2016) together with a new electricity transmission system (Law No. 20,936/2016).

The bids subsequent to the new regulation managed to lower the prices for the awarding of energy blocks for distribution. This, driven by the drop in international prices of technologies linked to NCRE (52% of the energy tendered in 2016 would come from NCRE and this percentage reached 100% in 2017). Based on this, a future price drop in energy accounts is projected (CNE 2017, 2018b).¹³ At the same time, an increase in the participation of NCRE in the electrical installed capacity has been observed, which in January 2020 reached 22.3% (mostly solar photovoltaic with 11%) with 52.1% thermo-electric and 25.6% conventional hydroelectric (CNE 2020a, 2020b).

However, as in the past, the new measures have not been able to break the oligopolistic corporate power of the main generation companies, nor have they sought to modify the market structure in the transmission and distribution sectors. This, despite the fact that part of the tenders were awarded to new players, the incorporation of the public company ENAP as a potential energy generator and the new roles granted to the CNE in the expansion plans of the trunk transmission system (whose construction and operation also remains in private hands). Notwithstanding the aforementioned incorporation of new actors - all private- close to 50% of the total of two bids was awarded to Endesa/ENEL (CNE 2017, 2018b). In January 2020, companies of the Chilean Generators Association generated 80% of SEN’s energy. While AES Gener produced 29%, ENEL produced 22%, Colbún 13% and ENGIE 9% (Generators 2020) continuing Chile’s place among the ten countries with the largest amount of private investment in the international sector (IEA 2018).

Another concern relates to GHG emission data. According to the latest update by the Government, GHG emissions from the energy sector increased by 48% between 2010 and 2016 (Gobierno de Chile 2018) while CO₂ emissions from SIC-SING in 2015 and 2016 were higher than in 2010 and 2011 (Min. Energia 2018). In this sense; the rapid increase in the participation of NCRE in the electricity matrix is not so much in the primary matrix (despite going from 0.5% in 2014–2.8% in 2018), allowing a residual decrease in the participation of the most polluting sources such as fossil fuels (68% in 2014, 65% in 2018) (BNE 2018). Recent studies and projections point to a sustained growth in energy demand independent of prices, associated with a growth in generation capacity, which will make it difficult to meet emission reduction targets (O’Ryan et al. 2019, 2020; Valdés et al. 2019).

In general, both in the scenario prior to the implementation of the “revolutionary” policies and consequent energy measures promoted from 2014 (Pacheco 2018), the basal structure that has characterized the Chilean energy sector has been barely modified. In it—as in the scenario of marketized depoliticization of the United Kingdom described by Kuzemko (2016)—private market players remain responsible for the provision of energy goods and services on which households and industries depend daily. In the post-reform framework, the role of the State continues to be that of a referential planner and entity responsible for providing the necessary stimuli for energy market development, making energy security and climate change mitigation measures dependent on the private sector making the necessary investment in new energy infrastructure (Kuzemko 2016, 115). The latter has been demonstrated in the negotiations that the current government has carried out to advance in a plan for the withdrawal of thermoelectric plants, whose success is based on the willingness of the generating companies to recognize their obsolescence; and, not on a government decision or the environmental damage they cause in the different slaughter zones.

Precisely, it is the establishment of investment decisions in the area of energy generation in private investors without much space for the agency of other groups that Bues & Gailing identifies as marketized (privatization) depoliticization (2016, 86). Although in the meantime tariff equity initiatives were promoted and failed attempts to promote distributed generation, these have not been successful nor do they change the logic of private definition of the final locations of generation projects through environmental approval. These decisions are in turn determined by the needs of large consumers such as copper mining, which is expected to increase its energy demand by 32% to 38% by 2028 (COCHILCO 2017; Furnaro 2019).

This type of organization of public services is far from strange in Chile and is replicated for fields such as the provision of drinking water and sewage and telecommunications (Tecklin, Bauer, and Prieto 2011). The fundamental idea behind the whole neoliberal ideology of the Chilean model is faith in the efficiency of the market and the assumption of political neutrality of its mechanisms, which presents the paradox of being a highly ideologized argument that ignores the institutional framework of operation of the markets (Prieto and Bauer 2012). This becomes evident in concentrated markets such as the energy one, where the power of the corporate elites takes even more strength.

3.2. Technocratic depoliticization: renewal and permanence of expert energy agencies

In matters of high technical content such as energy, the privatization of the sector is usually accompanied by institutional depoliticization (Flinders and Buller 2006), marked by the

establishment of government decision-making in essentially technocratic or independent bodies far from public scrutiny and transparency. This condition is not contradictory with the marketized depoliticization, but it indicates that the attributions or functions that the state continues to hold, are delegated to these entities, whose decisions are justified after considerations of a technical or expert nature (Hay 2007; Bues and Gailing 2016; Kuzemko 2016).

The pre-eminence of the technocratic approach has a long tradition in Chile. The delegation of the management of the social and problematic core of public affairs to expert bodies is identified as one of the central axes of the strengthening of the neo-liberal system and depoliticization in the country context (Silva 1991, 2004, 2006, 2008, 2011; Huneus 2000; Budds 2009; Ureta 2017). This technocratic management is based precisely on the idea of constructing a technified society where the most capable adopt the specialized decisions, limiting the political system to evaluating and assigning to the technocracy the responsibility of employing logical procedures for the resolution of the problems (Silva 1991, 2011; Huneus 2000; Budds 2009).

In the energy field, this trend began even before DFL N°4 (LGSE) came into force, with the creation of the National Energy Commission (CNE) in 1978 by Decree-Law | No. 2,224. At first, the military dictatorship entrusted its management to one of its most trusted men, General Herman Brady, who directed it until the end of the dictatorship in 1990. Legally, its status corresponded to a legal person under private law, functionally decentralized and with its own capital. The central objective of the CNE was to draw up and coordinate development plans, policies and standards for the proper functioning and development of the sector, ensure compliance with them and advise the government on all energy-related matters. One of its most significant actions at the outset was the preparation of DFL N°4 of 1982.

In 2010, the Ministry of Energy was created (Law 20.402/2010), separating the public policy functions that remain in the Ministry from those related to the regulatory area maintained by the CNE. Previously, energy matters were linked to the Ministry of Mining. Until then, the CNE had played an important role in defining energy policy guidelines in the face of the various crises experienced during the droughts of 1998/99 and the shift towards natural gas-based generation, as well as the Argentine gas crisis and the installation of LNG terminals (Raineri 2007; CNE 2017). Despite the reform, the CNE would continue to monitor and project the current and expected performance of the energy sector and advise the Government through the Ministry on all matters related to the energy sector for its better development. Along with the area of general and technical regulations, the CNE would continue to be the body that defines, from the technical point of view, projects for expanding the energy transmission system and energy prices among other central topics for the operation of the energy sector.

Another relevant entity in the operation of the energy sector was the *Centro de Despacho Económico de Carga* (Economic cargo dispatch center) (CDEC). To this figure created by DFL N°4 corresponded the coordination of the interconnected operation of the generating plants and transmission lines. The CDECs were private entities, whose boards were composed of representatives of the energy generation and transportation companies. Diverse and gradual regulations established the obligation of integrating it for a great part of the distribution and transmission companies. In 1993, the already existing CDEC-SIC (Central Interconnected System) was joined by the CDEC-SING (Great North Interconnected System), which operated autonomously.

In addition to these, a “Panel of Experts” created by Law No. 19.940/2004. This body, made up of seven professionals (five of whom must be engineers or graduates in economic

sciences and two lawyers with extensive professional or academic experience in technical, legal or economic energy matters), is responsible for issuing pronouncements on discrepancies related to technical reports on the transmission expansion plans, conflicts over acts of coordination of the system and other energy discrepancies with a high and complex technical content (Panel de Expertos 2014)

The structure and functions of the CNE and the CDECs were affected by the regulations promoted by the new public energy policies since 2014. During the processing of the new law on electric power block concessions (Law 20.805/2015), there were a discussion on whether the process should continue to be handled by the energy distribution companies, be handed over to the CDECs or remain under the control of the CNE. The decision taken was to hand over the design, coordination and direction of the bids to the CNE. This decision was based on the idea of giving the State a predominant role in guiding and regulating the energy market, because of its public service nature, but to place it in its technical agencies (CNE 2017). Despite the new role given to the CNE, the distribution companies retained their role in managing and executing the processes.

The Law that established a new electricity transmission system (Law N°20.936/2016) also brought about changes. This law, which responded to one of the central axes of the new public energy policy regarding “connectivity for energy development”, made it possible to interconnect the two main national electricity systems (SING-SIG) and to replace the challenged CDECs with an “Independent Coordinator of the National Electricity System” (the “Coordinator” or “CEN”). This new entity was conceived as a technical and independent organism, in charge of the coordination of the operation of the National Electric System (SEN) facilities that operate interconnected between them (CNE 2017). One of the advantages of interconnection is that it would allow greater integration of NCRE located in the north of the country.

Under the new regulation, the planning of the processing is handed over to the technical management of the CNE and the Coordinator. The Ministry of Energy would prepare long-term energy scenarios (30 years) and the CNE would plan for 20 years, but the effective planning procedure begins with the proposal submitted annually by the Coordinator to the CNE. On the basis of this proposal, the CNE prepares a technical report that can be commented upon, after which a final technical report is prepared. The Panel of Experts can resolve any subsequent observations. If there are no observations, the Ministry of Energy will set the extension works of the transmission systems based on the CNE’s report for its subsequent private tender. In their genesis, expansion plans depend largely on the identification of electricity generators.¹⁴

This new scenario, beyond the greater visibility that the Ministry of Energy has acquired especially between 2014 and 2016 under the command of former Minister Pacheco, has implied the prevalence of the management of technocratic agencies in the government’s work related to energy and the already described characteristics of the energy sector (private monopolies and oligopolies). This delegation of the decision-making function is what Bues and Gailing (2016) and Kuzemko (2016) define as the expression of technocratic (governmental-delegation) depoliticization of energy issues.

One of the consequences of this delegation is a detriment to the transparency and direct social accountability of decisions (Bues and Gailing 2016, 86) and the conception of energy as an area far from the majority discussion, from the area of political discussion and social contingency. These characteristics flow from the parameters on which decisions are usually defined, where politics should not interfere in economic matters such as energy (Silva 2008, 2011; Budds 2009; Kuzemko 2016, 117). Another consequence of presenting energy decisions as merely technical matters is to discourage the agency of sectors of

society that could be overwhelmed by their complexity and lack of knowledge about the functioning of the electricity system (Rosenow, Platt, and Flanagan 2013). This disconnection between energy, politics and society becomes a strategy for civil society to conceive of themselves as mere recipients and consumers of energy services (Kuzemko 2016), instead of potential active agents empowered to change towards alternative socio-energetic futures. This undisputed pre-eminence of expert thinking extends to various instances of the energy decision-making process, as will be illustrated in the following section.

3.3. *Non-deliberative depoliticization: the contours of consensus and participation*

The energy transition processes are usually conceived as instances to redefine the dynamics and energy systems (Burke and Stephens 2018) and germ of construction of common and innovative visions towards “more sustainable” futures in the long term (Rotmans, Kemp, and Van Asselt 2001; Schot and Geels 2008; Bues and Gailing 2016; Gailing 2016; Ureta 2017; Alvia-Palavicino and Opazo-Bunster 2018). In this sense, the possibility of a democratic and participatory co-creation process is important in the definition of the long-term policy design towards such a transition (Hendriks 2009; Van den Bosch 2010; Stirling 2014; Chilvers and Longhurst 2016).

The new Energy Policy 2050 of 2015 raised the declared intention to differentiate itself from previous processes and advance in a greater social inclusion in the matter (Min. Energia 2014; Alvia-Palavicino and Opazo-Bunster 2018). Previously, in general terms, public participation within the energy sector was seen in advance as an irrelevant aspect and based on other services or areas, mainly those related to the environmental evaluation of projects (Ureta 2017). The new *participatory approach* or *participatory turn* (Ureta 2017; Urquiza et al. 2018) considered the formation of a “Consultative Committee”¹⁵ focused on building a common vision for the energy sector (Roadmap 2050) that would allow the development of a long-term energy policy with social legitimacy (Min. Energia 2015, 10). This social legitimacy would come from the generation, within a participatory process, of a broad consensus regarding the long-term energy strategy, which would emerge from within a socially representative body of the various sectors of society (Ureta 2017; Alvia-Palavicino and Opazo-Bunster 2018).

It should be noted that the creation of this consensus on long-term orientation and terms of action was the central axis of the elaboration of the roadmap (Alvia-Palavicino and Opazo-Bunster 2018). In the case of the Energy Policy 2050, the defined consensus goal corresponded to reaching 70% of electricity production from renewable energies by 2050 (Min. Energia 2015; Alvia-Palavicino and Opazo-Bunster 2018; Urquiza et al. 2018). The agreement within the Committee on how to reach this goal was based on work scenarios built on the basis of demand and energy cost projections to adopt the most conservative option. As Alvia-Palavicino and Opazo-Bunster (2018) and Urquiza et al. (2018) show, these scenarios were used to check the feasibility of the goals previously determined by the Committee. This limited the options to a mere reproduction of present and future patterns, excluding the possibility of considering other alternatives for the electricity sector, such as decentralized or distributed generation systems.¹⁶

Within these parameters, dissent was reduced to the choice between the various projected future scenarios, by which the contours of the previously defined goal were defined from the technical approach. As a consequence, the dimensions that went beyond technical-economic and market considerations in the elaboration of the new public policy guidelines were excluded. The way to make this decision-making system viable was the result of the selection of actors carried out by the Ministry of Energy,

those who in principle shared or were inclined to the common goal (Avelino and Rotmans 2009; Rotmans and Loorbach 2009; Kenis, Bono, and Mathijs 2016). This is evident in the selection of the NGOs that take part in the Consultative Committee (those that have the function of being representative of civil society), where preference was given to those that were seen as technical partners to the detriment of those with strong political commitment between local environmental movements and citizens (Alvial-Palavicino and Opazo-Bunster 2018).

The original design of the 2050 energy policymaking process considered the incorporation of citizen perspectives in the definition of the roadmap. However, its actual implementation meant that these were only incorporated later as a means of validating the Committee's work, without reflecting new expectations or values (Alvial-Palavicino and Opazo-Bunster 2018). All this means that the political and transformative potential of a transition process is inhibited, preventing the approach of innovative energy development approaches, prevailing neoliberal and market visions (Avelino and Rotmans 2009; Rotmans and Loorbach 2009; Bues and Gailing 2016; Kenis, Bono, and Mathijs 2016; Kuzemko 2016).

Applying the categories used by Kenis, Bono, and Mathijs (2016) to the case of Chilean energy policy, it is possible to identify the characteristics of a post-political condition. This is because the openness of the transition process was limited by the idea of achieve a consensus, where conflict and dissent was reduced to the debate on technocratically defined scenarios. This tendency is common to all transition management processes, where a distinction is made between a shared general vision or goal (consensus) and a multiplicity of strategies to achieve it (dissent) (Kenis, Bono, and Mathijs 2016, 575). Both the goal and the strategies are supported by a notion of a common good that is pre-established from a normative approach and privileges expert knowledge (Ureta 2017; Urquiza et al. 2018; Alvial-Palavicino and Opazo-Bunster 2018). With this, no space is given to alternative visions, eliminating the political dimension inherent to the debate on transition. The desired representativeness of the new policy is submerged in a mere slogan. In practice, this participation is restricted to actors with a common vision, and citizen opinion is limited to a mechanism for validating options that do not innovate outside the current framework, i.e. a centralized energy system based on dynamic market logic.

It is precisely these features of the elaboration of the Energy Roadmap and Policy 2050 that make it possible to identify it as a manifestation of non-deliberative or denial depoliticization by resulting in the reduction of "capacity for politics as deliberation and as choice between different solutions to problems" rejecting "other voices that recommended more profound government involvement or change" (Kuzemko 2016, 118–119). What ultimately prevails as official discourse is the uncontested need to carry out the energy transition (NCRE promotion) from the approach of economic variables, without questioning the prevailing market logic, thereby restricting the space of civil society to co-determine the process (Bues and Gailing 2016, 88) and propose alternative patterns of development and energy futures.

4. Discussion

In this paper we have sought to operationalize the theoretical and analytical approach to depoliticization in the study of the Chilean energy transition process. The above allows us to argue that both before the start of the transition process initiated in 2014 and in the subsequent period, it is possible to identify a post-political condition in the Chilean energy sector. This condition is based on the operationalization of various forms of

depoliticization described. This explains that despite advancing in an energy transition from the technological perspective with the entry of NCRE to the matrix, a transition is not materialized in the social or political aspects related to energy.

In this way, energy decisions continue in the hands of private monopolistic and oligopolistic actors, who with the permission of the State define the location of projects without effective processes of citizen participation beyond the -often testimonial- instances of environmental qualification. This is the expression of *marketized (societal) depoliticization*. The powers of the State in this area refer to referential definitions based on technocratic considerations emanating from equally technocratic public bodies, whose decisions are difficult to scrutinize from a political perspective and with little margin for participation. This is a clear expression of the *technocratic or governmental depoliticization*. The real definition of the priorities and guidelines of the development model of the so-called energy transition is linked to processes that, despite the declared of a *participatory turn*, are limited to a small group of pre-selected actors and the reproduction of technocratic and market considerations within the framework of the sustainable development discourse and the unquestionable need for the energy transition towards a renewable energy matrix. In this way, the potential contained in the transition processes to really modify energy systems becomes illusory, leaving the discussion on the various ways of imagining the future of energy and the role of the various actors in its definition. This last aspect, manifested in the elaboration of the roadmap and energy policy and 2050, is the characteristic feature of *non-deliberative depoliticization*, which is difficult to dissociate from the technocratic aspect of depoliticization.

One of the characteristics of the Chilean energy transition has been the clear option for the invisibility of ideological disputes and debates, replacing them with techno-managerial (public-?) private planning, expert management and consensual participatory processes. Under this scenario, citizens continue to be treated as mere passive clients and the local communities where the projects are located as agents without voice or vote, who are only called to form part of formal instances of participation that only seek to legitimize the decisions already adopted that do not directly or indirectly benefit them.

The transition of the fossil pattern that dominates the energy life of the Southern Cone is driven by the “green-friendly” discourse of advancing towards the de-carbonization of the matrix fighting against climate change, but hides depoliticization dynamics and a post political condition of an energy transition of transforming character. The success of the Chilean Energy Policy lies precisely in the fulminant incorporation of NCRE energies. In this way, Chile is presented as a model to follow in terms of climate change and substitution of fossil fuels with wind, small hydro and solar technologies. However, there are concerns about how green the Chilean matrix is, if the share of fossil fuels does not decrease, or how clean is the energy transition in Chile if CO₂ emissions do not stop increasing. All this in a policy of energy security, with imports of coal and natural gas on the rise and a role for the State as guarantor and promoter of adequate conditions to private investment in the energy sector. Is what former minister Pacheco defines as the energy revolution (Pacheco 2018), what really happens in Chile?

The root problems, radicalized in the strategic analyses of the Chilean energy transition -driven by progressive, center-left and right-wing governments-, do not account for the political problems, but seek to overlook them for the greater good of economic growth based on the market and badly called sustainable development. In this way, the maelstrom of the green economy and the transition to sustainability is a depoliticized strategy of socio-ecological transformations. Assimilating the de-politicization and post-political condition of the energy transition in the Chilean case, invites us to appreciate the incredible resilience

of modern capitalist States with the unsustainability of their socio-natural metabolisms. The greenwashing of the strategy, based only on changes in the electrical energy matrix, reproduces the same market dynamics and privatization, now with carbon credits as a way of financing nature, technological dependencies and replicating enclave economies in the territories (solar and wind and in the north, wind and hydroelectric in the center and south). This shows us that a transformation towards sustainability is not underway, or at least, inside very discussible terms.

In this context, the so-called “Chilean energy revolution” (Pacheco 2018) can indeed be considered a revolution, but a “passive revolution” in Gramscian terms (Wanner 2015; Neusteuer 2016; Brand, Görg, and Wissen 2020). This, since it has allowed to renew the dominant discourse of sustainable development and capitalist hegemony within the current framework of environmental, climate and global development crisis (Wanner 2015; Brand and Wissen 2017; Brand, Görg, and Wissen 2020).

Nevertheless, it should be noted that the closure of the debate on the model of future energy development and its replacement by the imposition of technocratic and market visions does not silence the essence and origin of their demand. As Mouffe points out, “it is not enough to eliminate the political in its dimension of antagonism and exclusion from one’s theory to make it vanish from the real world. It does come back, and with a vengeance” (2000, 31). The symptom of this is reflected in cases of *repoliticization* and resistance that we can find beyond the energy spectrum, as has been demonstrated since October 2019 in Chile. As for the energy field this is expressed in the questioning of the parameters of “sustainable” energy development (Kelly et al. 2017; Natho 2017; Kelly 2019) and the growing conflict and resistance that NCRE projects generate in the territories and among local communities (INDH 2018¹⁷).

5. Conclusions

Since 2014, the definition of a long-term energy future has been a central issue in the public policy debate. However, the promotion of various public policy instruments and energy regulations that have allowed the advance of NCRE in the energy matrix has gone hand in hand with the continuation of depoliticization mechanisms that perpetuate a centralized, privatized, technocratic and non-deliberative energy system.

Even though the innovations introduced in the sector have allowed the entry of new actors in energy generation and promoted NCRE, the development of energy infrastructure continues to depend on private will, which is organized in monopolistic and oligopolistic structures. State participation has sought to be reoriented to have a greater interference, but the cosmetic reforms do not change the model of the sector based on a highly depoliticized technocratic and private management. The proposed new energy approach announced a participatory definition of the energy roadmap to 2050, nevertheless, its formation process shows the prevalence of a non-deliberative depoliticization, limiting the effective participation of new actores and the progress and visibility of alternative energy futures to those mapped out beforehand from an “expert” option based on stimulating the NCRE market.

In view of the above is that we can understand how and why the process of energy transition in Chile, despite its good international reputation, is far from being a revolutionary project as it has promoted the entry of NCRE in the electricity matrix without changing the structure of the sector, production and consumption patterns of energy or encourage the development of a more democratic, decentralized or distributed system. This scenario limits the range of action of the State in energy matters, making it difficult to achieve real progress towards decentralized and truly sustainable systems, both environmentally

and socially. It also generates the seed for the resurgence of resistance and crisis that will clamor for the need for a real and deep re-politicization of the discussion on a common and truly transformative energy future.

Notes

1. The Chilean law indicates that NCRE correspond to small hydroelectric plants (less than 20 MW of maximum power), and projects that take advantage of biomass, geothermal, solar, wind and marine energy, among others (Law No. 20257 of 2008). This definition excludes large hydroelectric plants due to the high social and environmental impacts of the infrastructure of the reservoirs and the strong presence that they have historically had in the Chilean electricity matrix.
2. Within the national context, Al Gore's presentation at Climate Action 2016 in Washington DC is constantly highlighted. Available at: <https://www.youtube.com/watch?v=BnXhTggl3RE>
3. Similar to the context of transformations as "new critical orthodoxy" proposed by Brand (2016).
4. Bues & Gailing explores the "ways of linking the concepts of governmentality and depoliticization in order to incorporate both actor- and non-actor-based power shifts in the study of energy transitions" (2016, 69).
5. This comparison is made in order to contrast the progress, in terms of participation and political legitimacy that the energy transition discourse has pretended to have in contrast to the scenario that preceded it.
6. This comparison is made in order to contrast the progress, in terms of participation and political legitimacy, that the energy transition discourse has pretended to have in contrast to the scenario that preceded it.
7. The subsidiary role of the State implies that "the State does not act or decide as long as there are persons, organizations and intermediate institutions of society that are capable of acting and deciding at their level, in the most varied fields" (CNE 2017).
8. The military government's position is summarized in the statements of its Finance Minister Hernan Buchi quoted by Tecklin, Bauer, and Prieto 2011 "In Chile there had to be... a complete sweep within all the sectors of the economy to remove the statist weed. That was what gave the Chilean economic revolution so much significance, range and depth" (Büchi 1993, 64).
9. Regulated customers were those with connected power below 5000 kW or above 500 kW who have not opted for the system of free customers (they have little negotiating capacity). Free customers would be those who have a connected power greater than 2000 kW and can directly agree on the price of their electrical energy with generators. For more information on the pricing structure, see CNE (2017).
10. This is done through the National Energy Commission (CNE) and the Superintendence of Electricity and Fuel (SEC).
11. For more detail on the history of the Chilean energy sector see Vergara (2004), Fischer and Serra (2004) and Proaño (2015).
12. These regulations are based on the occurrence of various events such as the drought of 1998/1999, which implied a turn towards stimulating the import of Argentine gas and thermoelectric generation based on natural gas. Subsequently, the Argentine gas crisis and the cutback in imports motivated the focus on diesel-based thermoelectric generation, which revealed the urgency of diversifying the energy matrix and promoting alternatives to take advantage of the incipient removable potential, but without implying an explicit long-term energy policy. More information on these processes can be found in CNE (2017) and Simsek et al. (2019).
13. If the prices of the 2013 bid are considered, the price was reduced by more than 75% and would mean a reduction in the energy accounts of regulated users by 2024 (CNE 2017).
14. Chapter III of the DFL N°382 modified by Law N°20.936
15. This Committee was made up of 27 members selected by the Ministry of Energy. Eight of its members were government authorities, seven were NGOs and Civil Society Organizations, seven were members of academia and five were industry associations.
16. Although regulations were issued in these areas, their absence or low incidence reveals the low priority that the public and private worlds have given to this type of alternative.

17. According to the “Map of Socio-environmental Conflicts in Chile” of the National Institute of Human Rights (Loorbach et al. 2010) of the 116 latent conflicts, 38% are related to the Energy sector. Although the majority are linked to thermo and large hydroelectric projects, many of them correspond to NCRE and its associated infrastructure.

References

- Agostini, C., C. Silva, and S. Nasirov. 2017. “Failure of Energy Mega-Projects in Chile: A Critical Review From Sustainability Perspectives.” *Sustainability* 9 (6): 1073. doi:10.3390/su9061073.
- Alvial-Palavicino, C., and J. Opazo-Bunster. 2018. “Looking Back to go Forward? The Interplay Between Long-Term Futures and Political Expectations in Sustainability Transitions in Chile.” *Futures* 104: 61–74.
- Avelino, F., J. Grin, B. Peł, and S. Jhagroe. 2016. “The Politics of Sustainability Transitions.” *Journal of Environmental Policy & Planning* 18 (5): 557–567.
- Avelino, F., and J. Rotmans. 2009. “Power in Transition: an Interdisciplinary Framework to Study Power in Relation to Structural Change.” *European Journal of Social Theory* 12 (4): 543–569.
- Avelino, F., and J. M. Wittmayer. 2016. “Shifting Power Relations in Sustainability Transitions: a Multi-Actor Perspective.” *Journal of Environmental Policy & Planning* 18 (5): 628–649.
- Bachelet, M. 2013. Programa de Gobierno 2014-2018. http://www.subdere.gov.cl/sites/default/files/programamb_1.pdf.
- Bauer, C. 2002. *Contra la Corriente: privatización, mercados de agua y el Estado en Chile*. LOM Ediciones.
- Bauer, C. 2004. *Siren Song: Chilean Water Law as a Model of International Reform*. RFF Press.
- Bauer, C. J. 2010. “Dams and Markets: Rivers and Electric Power in Chile.” *Natural Resources Journal* 49: 583–651.
- BNE (Balance Nacional de Energía). 2018. <http://energiaabierta.cl/visualizaciones/balance-de-energia/>.
- Boyer, D. 2014. “Energopower: an Introduction.” *Anthropological Quarterly* 87 (2): 309–333. doi:10.1353/anq.2014.0020.
- Brand, U. 2016. “Transformation as a New Critical Orthodoxy: The Strategic Use of the Term Transformation Does not Prevent Multiple Crisis.” *GAIA* 25/1 (2016): 23–27.
- Brand, U., C. Görg, and M. Wissen. 2020. “Overcoming Neoliberal Globalization: Social-Ecological Transformation From a Polanyian Perspective and Beyond.” *Globalizations* 17 (1): 161–176.
- Brand, U., and M. Wissen. 2017. “Social-Ecological Transformation”. *International Encyclopedia of Geography: People, the Earth, Environment and Technology* (eds. D. Richardson, N. Castree, M. F. Goodchild, A. Kobayashi, W. Liu and R. A. Marston). doi:10.1002/9781118786352.wbieg0690.
- Büchi, H. 1993. *La transformación económica de Chile: Del estatismo a la libertad económica*. Bogotá: Norma.
- Budds, J. 2009. “Contested H2O: Science, Policy and Politics in Water Resources Management in Chile.” *Geoforum; Journal of Physical, Human, and Regional Geosciences* 40 (3): 418–430.
- Bues, A., and L. Gailing. 2016. “Energy Transitions and Power: Between Governmentality and Depoliticization.” In *Conceptualizing Germany’s Energy Transition*, edited by L. Gailing, and T. Moss, 69–91. London: Palgrave Macmillan UK.
- Burke, M. J., and J. C. Stephens. 2018. “Political Power and Renewable Futures: A Critical Review.” *Energy Research & Social Science* 35: 78–93.
- Burnham, P. 2000. “Globalization, Depoliticization and Modern Economic Management.” In *The Politics of Change*, edited by W. Bonefeld and K. Psychopedis, 9–30. London: Palgrave Macmillan.
- CEN (Centro de Energías Renovables). 2014. *Reporte Anual 2013 ERNC*. Febrero de 2014.
- Chilvers, J., and N. Longhurst. 2016. “Participation in Transition (s): Reconciving Public Engagements in Energy Transitions as co-Produced, Emergent and Diverse.” *Journal of Environmental Policy & Planning* 18 (5): 585–607.
- CNE (Comisión Nacional de Energía). 2008. *Política Energética: Nuevos Lineamientos. Transformando la Crisis Energética en una Oportunidad*. https://www.cne.cl/archivos_bajar/Politica_Energetica_Nuevos_Lineamientos_08.pdf.
- CNE (Comisión Nacional de Energía). 2017. *Nueva Ley Chilena de Licitaciones de Suministro Energético para Clientes Regulados: Un Caso de Éxito*. <https://www.cne.cl/wp-content/uploads/2017/08/Libro-Licitaciones-de-Suministro-El%C3%A9ctrico.pdf>.

- CNE (Comisión Nacional de Energía). 2018a. Anuario Estadístico de Energía 2017. <http://www.revistaei.cl/wp-content/uploads/sites/5/2018/06/Anuario-2017-CNE-junio2018-1.pdf>.
- CNE (Comisión Nacional de Energía). 2018b. Datos Licitaciones de Suministro. <https://www.cne.cl/nuestros-servicios/licitaciones-y-suministros/>.
- CNE (Comisión Nacional de Energía). 2020a. Reporte Mensual Sector Energía, Volumen N° 60, Febrero 2020.
- CNE (Comisión Nacional de Energía). 2020b. Reporte Mensual ERNC, Volumen N° 4, Febrero 2020.
- COCHILCO (Corporación Chilena del Cobre). 2017. *Proyección del consumo de energía eléctrica en la minería del cobre 2017-2028*. <https://www.cochilco.cl/Mercado%20de%20Metales/Proyecci%C3%B3n%20Consumo%20EE%202017-2028%20v2.pdf>.
- Fabra, N., J. Montero, and M. Reguant. 2014. La Competencia en el Mercado Eléctrico Mayorista en Chile. http://www.fne.gob.cl/wp-content/uploads/2014/01/informe_final_FNE_Ene-ro13_2014.pdf.
- Fischer, R., and P. Serra. 2004. Efectos de la privatización de servicios públicos en Chile: Casos sanitario, electricidad y telecomunicaciones. Serie de Estudios Económicos y Sociales BID Octubre 2004.
- Flinders, M., and J. Buller. 2006. “Depoliticisation: Principles, Tactics and Tools.” *British Politics* 1 (3): 293–318.
- Furnaro, A. 2019. “Neoliberal Energy Transitions: The Renewable Energy Boom in the Chilean Mining Economy.” *Environment and Planning E: Nature and Space*. doi:10.1177/2514848619874685.
- Gailing, L. 2016. “Transforming Energy Systems by Transforming Power Relations. Insights From Dispositive Thinking and Governmentality Studies.” *Innovation: The European Journal of Social Science Research* 29 (3): 243–261. doi:10.1080/13511610.2016.1201650.
- Gárate, M. 2012. *La Revolución Capitalista de Chile (1973-2003)*. Santiago: Ediciones Universidad Alberto Hurtado. 2012, 589 p.
- Generadoras (Generadoras de Chile A.G.). 2020. Boletín Mercado Eléctrico Sector Generación Enero 2020. <http://generadoras.cl/documentos/boletines/boletin-mercado-electrico-sector-generacion-enero-2020>.
- Gobierno de Chile. 2015. Contribución Nacional Tentativa de Chile (INDC) para el Acuerdo Climático Paris 2015. Septiembre de 2015. <http://www4.unfccc.int/Submissions/INDC/Published%20Documents/Chile/1/Chile%20INDC%20FINAL.pdf>.
- Gobierno de Chile. 2018. Tercer Informe Bienal de Actualización de Chile sobre Cambio Climático. <https://mma.gob.cl/wp-content/uploads/2018/12/3rd-BUR-Chile-SPANISH.pdf>.
- Harvey, D. 2007. *A Brief History of Neoliberalism*. USA: Oxford University Press.
- Hay, C. 2007. *Why we Hate Politics (Vol. 5)*. Polity.
- Healy, N., and J. Barry. 2017. “Politicizing Energy Justice and Energy System Transitions: Fossil Fuel Divestment and a Just Transition.” *Energy Policy* 108: 451–459. doi:10.1016/j.enpol.2017.06.014.
- Hendriks, C. M. 2009. “Policy Design Without Democracy? Making Democratic Sense of Transition Management.” *Policy Sciences* 42 (4): 341–368.
- Huneus, C. 2000. “Technocrats and Politicians in an Authoritarian Regime: the ‘ODEPLAN Boys’ and the ‘Gremialists’ in Pinochet’s Chile.” *Journal of Latin American Studies* 32 (2): 461–501.
- IEA. 2018. World Energy Balances 2017: Overview. <https://webstore.iea.org/world-energy-balances-2017-overview>.
- INDH (Instituto Nacional de Derechos Humanos de Chile). 2018. Mapa de Conflictos Socio-Ambientales en Chile. <http://mapaconFLICTOS.indh.cl/#/>.
- Jenkins, L. 2011. “The Difference Genealogy Makes: Strategies for Politicisation or How to Extend Capacities for Autonomy.” *Political Studies* 59 (1): 156–174.
- Kelly, S. 2019. “Megawatts Mask Impacts: Small Hydropower and Knowledge Politics in the Puelwillimapu.” *Southern Chile. Energy Research & Social Science* 54: 224–235. doi:10.1016/j.erss.2019.04.014.
- Kelly, S., N. Silber, A. Crootof, D. Tecklin, and C. Bauer. 2017. “Governing the Transition to Renewable Energy: A Review of Impacts and Policy Issues in the Small Hydropower Boom.” *Energy Policy* 101: 251–264.

- Kenis, A., F. Bono, and E. Mathijs. 2016. "Unravelling the (Post-)Political in Transition Management: Interrogating Pathways Towards Sustainable Change." *Journal of Environmental Policy & Planning* 18 (5): 568–584. doi:10.1080/1523908X.2016.1141672.
- Kenis, A., and M. Lievens. 2014. "Searching for 'the Political In Environmental Politics.'" *Environmental Politics* 23 (4): 531–548.
- Köhler, J., F. W. Geels, F. Kern, J. Markard, E. Onsongo, A. Wieczorek, F. Alkemade, et al. 2019. "An Agenda for Sustainability Transitions Research: State of the art and Future Directions." *Environmental Innovation and Societal Transitions* 31: 1–32.
- Kuzemko, C. 2014. "Politicising UK Energy: What'speaking Energy Security'can do." *Policy & Politics* 42 (2): 259–274.
- Kuzemko, C. 2016. "Energy Depoliticisation in the UK: Destroying Political Capacity." *The British Journal of Politics and International Relations* 18 (1): 107–124.
- Laird, F. 2013. "Against Transitions? Uncovering Conflicts in Changing Energy Systems." *Science as Culture* 22 (2): 149–156. doi:10.1080/09505431.2013.786992.
- Loorbach, D., J. C. van Bakel, G. Whiteman, and J. Rotmans. 2010. "Business Strategies for Transitions Towards Sustainable Systems." *Business Strategy and the Environment* 19 (2): 133–146.
- Meadowcroft, J. 2009. "What About the Politics? Sustainable Development, Transition Management, and Long Term Energy Transitions." *Policy Sciences* 42: 323–340.
- Min. Energía (Ministerio de Energía de Chile). 2014. Agenda de Energía: Un desafío país, progreso para todos. Mayo de 2014. http://www.minenergia.cl/archivos_bajar/Documentos/AgendaEnergia.pdf.
- Min. Energía (Ministerio de Energía de Chile). 2015. Hoja de Ruta 2050: Hacia una Energía Sustentable e Inclusiva para Chile. Septiembre 2015, Santiago de Chile. http://www.energia.gob.cl/sites/default/files/hoja_de_ruta_cc_e2050.pdf.
- Min. Energía (Ministerio de Energía de Chile). 2016. Energía 2050 – Política Energética de Chile. Segunda Edición. <http://www.energia2050.cl/wp-content/uploads/2017/12/Politica-Energetica-Nacional.pdf>.
- Min. Energía (Ministerio de Energía de Chile). 2017. Políticas Públicas Participativas: La Experiencia de Energía 2050.
- Min. Energía (Ministerio de Energía de Chile). 2018. Indicadores Ambientales: Emisiones de Gases de Efecto Invernadero (GEI) por Energía Generada. http://www.minenergia.cl/indicadoresambientales/?page_id=105.
- Mitchell, T. 2011. *Carbon Democracy: Political Power in the Age of Oil*. London: Verso.
- Mouffe, C. 2000. *The Democratic Paradox*. London: Verso.
- Mouffe, C. 2005. *On the Political*. London: Routledge.
- Mouffe, C. 2013. *Agonistics: Thinking the World Politically*. London: Verso.
- Nasirov, S., C. Agostini, C. Silva, and G. Cáceres. 2018. "Renewable Energy Transition: a Market-Driven Solution for the Energy and Environmental Concerns in Chile." *Clean Technologies & Environmental Policy* 20: 3–12. doi:10.1007/s10098-017-1434-x.
- Nasirov, S., E. Cruz, C. A. Agostini, and C. Silva. 2019. "Policy Makers' Perspectives on the Expansion of Renewable Energy Sources in Chile's Electricity Auctions." *Energies* 12 (21): 4149.
- Natho, F. 2017. Perspectivas de desarrollo "sustentable": El conflicto socioambiental de la energía eólica en el archipiélago de Chiloé. doi:10.13140/RG.2.2.29170.35522.
- Neusteurer, D. 2016. "The Concept of Green Economy and its Role in Hegemonic Neoliberal Capitalism." *Socijalna Ekologija* 25 (3): 311–324.
- O'Ryan, R., C. Benavides, M. Díaz, J. P. San Martín, and J. Mallea. 2019. "Using Probabilistic Analysis to Improve Greenhouse gas Baseline Forecasts in Developing Country Contexts: the Case of Chile." *Climate Policy* 19 (3): 299–314.
- O'Ryan, R., Sh. Nasirov, and A. Álvarez. 2020. "Renewable Energy Expansion in the Chilean Power Market: A Dynamic General Equilibrium Modeling Approach to Determine CO2 Emission." *Journal of Cleaner Production* 247. doi:10.1016/j.clepro.2019.119645.
- Osorio-Aravena, J. C., A. Aghahosseini, D. Bogdanov, U. Caldera, E. Muñoz-Cerón, and C. Breyer. 2020. "Transition Toward a Fully Renewablebased Energy System in Chile by 2050 Across Power, Heat, Transport and Desalination Sectors." *International Journal of Sustainable Energy Planning and Management* 25: 77–94.

- Pacheco, M. 2018. *Revolución Energética en Chile*, Ediciones UDP, Santiago de Chile.
- Panel de Expertos. 2014. Resolución de discrepancias en el sector eléctrico chileno: Reflexiones a 10 años de la creación del Panel de Expertos. <https://www.panelexpertos.cl/biblioteca/>.
- Prieto, M., and C. Bauer. 2012. "Hydroelectric Power Generation in Chile: an Institutional Critique of the Neutrality of Market Mechanisms." *Water International* 37 (2): 131–146.
- Proaño, M. 2015. Análisis crítico de la regulación y políticas de fomento relativas a las energías renovables no convencionales en Chile. Aproximaciones a la experiencia internacional en el contexto del cambio climático. Universidad de Chile, Santiago de Chile.
- Raineri, R. 2007. "Chronicle of a Crisis Foretold: Energy Sources in Chile." *International Association for Energy Economics* 27–30. www.iaee.org/documents/07fall.pdf.
- Rancière, J. 2006. *Hatred of Democracy*. London: Verso.
- REN21 Secretariat. 2016. Renewables 2016 Global Status Report. Paris, France.
- Rosenow, J., R. Platt, and B. Flanagan. 2013. "Fuel Poverty and Energy Efficiency Obligations—A Critical Assessment of the Supplier Obligation in the UK." *Energy Policy* 62: 1194–1203.
- Rotmans, J., R. Kemp, and M. Van Asselt. 2001. "More Evolution Than Revolution: Transition Management in Public Policy." *Foresight-The Journal of Future Studies, Strategic Thinking and Policy* 3 (1): 15–31.
- Rotmans, J., and D. Loorbach. 2009. "Complexity and Transition Management." *Journal of Industrial Ecology* 13 (2): 184–196.
- Schot, J., and F. W. Geels. 2008. "Strategic Niche Management and Sustainable Innovation Journeys: Theory, Findings, Research Agenda, and Policy." *Technology Analysis & Strategic Management* 20 (5): 537–554.
- Silva, P. 1991. "Technocrats and Politics in Chile: From the Chicago Boys to the CIEPLAN Monks." *Journal of Latin American Studies* 23 (2): 385–410.
- Silva, P. 2004. "Doing Politics in a Depoliticised Society: Social and Political Deactivation in Chile." *Bulletin of Latin American Research* 23: 63–78.
- Silva, P. 2006. "Los tecnócratas y la política en Chile: Pasado y Presente." *Revista de Ciencia Política* 26 (2): 175–190.
- Silva, P. 2008. *In the Name of Reason: Technocrats and Politics in Chile*. Pennsylvania: Penn State University Press.
- Silva, P. 2011. "La elite tecnocrática en la era de la Concertación." In *Notables, tecnócratas y mandarines*, edited by A. Joignant, and P. Güell, 241–269. Santiago de Chile: Ediciones Universidad Diego Portales.
- Simsek, Y., Á Lorca, T. Urmee, P. A. Bahri, and R. Escobar. 2019. "Review and Assessment of Energy Policy Developments in Chile." *Energy Policy* 127: 87–101. doi:10.1016/j.enpol.2018.11.058.
- Stirling, A. 2014. "Transforming Power: Social Science and the Politics of Energy Choices." *Energy Research & Social Science* 1: 83–95.
- Swyngedouw, E. 2010. "Apocalypse Forever? Post-Political Populism and the Spectre of Climate Change." *Theory, Culture & Society* 27 (2-3): 213–232.
- Szeman, I. 2014. "Conclusion: on Energopolitics." *Anthropological Quarterly* 87 (2): 453–464. doi:10.1353/anq.2014.0019.
- Tecklin, D., C. Bauer, and M. Prieto. 2011. "Making Environmental law for the Market: the Emergence, Character, and Implications of Chile's Environmental Regime." *Environmental Politics* 20 (6): 879–898.
- Tironi, M., and J. Barandiarán. 2014. "Neoliberalism as Political Technology: Expertise, Energy, and Democracy in Chile." *Beyond Imported Magic: Essays on Science, Technology, and Society in Latin America* 305: 305–329.
- Ureta, S. 2017. "A Very Public Mess: Problematizing the "Participative Turn" in Energy Policy in Chile." *Energy Research & Social Science* 29: 127–134.
- Urquiza, A., C. Amigo, M. Billi, and P. Espinosa. 2018. "Participatory Energy Transitions as Boundary Objects: The Case of Chile's Energía2050." *Frontiers in Energy Research* 6: 134.
- Valdés, J., A. Poque González, L. Ramirez Camargo, M. Meylí, Y. Masip, and W. Dorner. 2019. "Industry, Flexibility, and Demand Response: Applying German Energy Transition Lessons in Chile." *Energy Research & Social Science* 54: 12–25. doi:10.1016/j.erss.2019.03.003.
- Van den Bosch, S. 2010. Transition experiments: exploring societal changes towards sustainability. Vergara, A. 2004. *Derecho Eléctrico*. Santiago: Editorial Jurídica de Chile.

- Wanner, T. 2015. "The New „Passive Revolution“ of the Green Economy and Growth Discourse: Maintaining the „Sustainable Development“ of Neoliberal Capitalism." *New Political Economy* 20 (1): 21–41.
- Wood, M., and M. Flinders. 2014. "Rethinking Depoliticisation: Beyond the Governmental." *Policy & Politics* 42 (2): 151–170.
- Zizek, S. 1999. *The Ticklish Subject – The Absent Centre of Political Ontology*. London: Verso.
- Zizek, S. 2008. Censorship Today: Violence, or Ecology as a New Opium for the Masses. <http://www.lacan.com/zizecology1.htm>.