15 Coal, power and coal-powered politics in Indonesia¹

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Introduction

Indonesia is the fourth most populous country in the world. With 31 GW of coal-fired capacity currently in pre-construction or construction phase, the country ranks fifth among the global leaders in terms of future coal-fired (Shearer et al. 2020). Indonesia is also a major producer of coal. It is currently the fifth largest coal producer and largest coal exporter in the world. However, despite significant production of fossil fuels, 8% of its 265 million inhabitants or approx. 20 million are still without access to electricity. The country's energy strategy regards domestic energy resources, including coal, as *national development capital* to promote economic development (DEN, 2014). Despite the prominent role of coal in Indonesia's energy strategy, the country has committed to reducing its greenhouse gas (GHG) emissions. Under the administration of president Joko Widodo ("Jokowi"), who was elected in 2014, Indonesia joined the Paris Agreement and committed to a GHG emission reduction target of 29% below business as usual by 2030 (MOEF 2016). However, the continued development of coal-fired power plants represents a major threat to Indonesia's efforts to reduce GHG emissions. The government has acknowledged the high growth of investment in fossil power generation. If unchecked, energy-related GHG emissions could overtake the land-use sector as the major contributor in a few decades (MOF 2009; Resosudarmo und Jotzo 2011; MOEF 2015; Jotzo 2012).

The contradiction between aiming to reduce GHG emissions while promoting coal use raises the question of which underlying reasons are driving the envisioned increase of coal-fired power plants. Our analysis begins with the hypothesis that Indonesia's energy and climate policies arise from the complex interaction of different actors with different objectives. To provide a comprehensive, theory-guided analysis of the political economy determinants of Indonesia's expansion of its coal-fired power sector, we follow the framework by Jakob et al. (2020) covered in Chapter 1.

The previous literature has identified political drivers as pivotal to the prevalence of fossil fuels in Indonesia's energy system, despite fluctuating fossil fuel prices, environmental concerns and a green growth rhetoric in policy plans

(Dutu 2016; Anderson et al. 2016; McCarthy und Zen 2010; Gunningham 2013; Marquardt 2014; Atteridge et al. 2018; van Schaik et al. 2016). The political economy of Indonesia's energy policy has been the subject of analysis in recent literature. Bridle et al. (2018) analyze the political economy of Indonesia's renewable energy (RE) targets. They map the most relevant actors and conclude that the coal mining industry and the state-owned electricity utility Perusahaan Listrik Negara (PLN) are influential but unsupportive of RE deployment. Atteridge et al. (2018) provide an analysis of the political economy of coal in Indonesia. They identify the main drivers of coal production as decentralization of the allocation of mining permits, revenue sharing in the administrative and fiscally decentralized Indonesia, as well as political links to coal mining and the norms and interests shaping domestic energy policy. In their view, Indonesian energy policy is shaped by the goals of reducing dependence on imported fuels and relying on domestic natural resources as the basis for economic and social development.

We base our analysis on qualitative social science research methods and conduct semi-structured expert interviews with key stakeholders of Indonesian energy policy (Bogner et al. 2009). We developed an interview questionnaire (online appendix) and conducted all the interviews using this guideline. If consent was given, the interviews were recorded and a transcript was prepared. Content analysis was performed by coding transcripts and interview notes. As a starting point, we analyzed how frequently interviewees referred to the explicitly stated policy objectives by the Indonesian government, both in general as well as specific to energy and climate policy (Diekmann 2007). Within these objectives, sets of coherent content were grouped and put in relation to each other, thereby elaborating on actors and contextual factors, representing the core analysis of this chapter.

A total of 45 interviews were conducted in March and April 2018 with a total of 82 expert stakeholders of Indonesian energy policy. To ensure a sufficiently large sample, we considered interviewees from different sectors, for example, the government, the private sector, research institutes, development cooperation agencies and civil society. In order to consider possibly different perspectives between the national and provincial levels, interviews were conducted not only in Jakarta but also in the city of Samarinda, the capital of the province of East Kalimantan, one of Indonesia's major coal mining provinces. The online appendix provides a comprehensive overview of the key characteristics of the survey sample and the surveying instrument.

Energy sector and climate policies in historical perspective

Indonesia's energy sector has been historically determined by the prevalence of state-owned enterprises (SOEs), with both Pertamina (oil and gas) and PLN (electricity) being under state control. The Ministry of State Owned Enterprises (MSOE) was created in 1998 to formally separate the functions of shareholder and regulator of companies (Tjager 2000). The MSOE is the shareholder of

PLN, while the Ministry of Energy and Mineral Resources (MEMR) retains the function of regulator in the electricity and mining sectors (IEA 2015). As a loss-making entity, PLN sells electricity below production costs and hence requires subsidies to operate (Harrington 2017). Due to the relevance of energy subsidies in Indonesia's public budget, the Ministry of Finance (MOF) is responsible for overseeing PLN. Subsidy allocation is determined by the Parliament and the MOF. PLN generates the majority of the country's electricity and has an effective monopoly on all power grids. Independent power producers (IPPs) must enter into power purchase agreements (PPAs) with PLN, which can negotiate favorable conditions for itself or otherwise refuse to agree on PPAs (Harrington 2017; IEA 2015).

The country's current national energy policy, *Kebijakan Energi Nasional* (KEN), the national energy plan (RUEN) and the "*Master Plan Acceleration and Expansion of Indonesia Economic Development*" envisage that more than 30% of the total primary energy supply (TPES) will be provided by coal by 2025 and at least 25% by 2050 (DEN 2014; Coordinating Ministry for Economic Affairs 2011). One of the main projects of the Jokowi administration is to build 35 GW of additional power plants, of which approximately 20 GW are coal. Another key target is to reach an electrification rate of 100% by 2024 through PLN's rural electrification program (RPJM 2015–2019, RUKN 2018–2025). Since 2013, there has been a gradual phase-out of electricity subsidies and a corresponding rise of tariffs for end consumers (Burke und Kurniawati 2018). Electricity tariffs were, however, frozen in 2018 and 2019 (IEEFA 2018). To reduce costs for PLN, the MEMR has capped the price of coal sold to PLN for power generation at 70 USD per ton, which is well below the market price of recent years. As long as the market price for Indonesian thermal coal is above 70 USD per ton, this so-called Domestic Market Obligation (DMO) represents a subsidy to PLN for coal consumption.²

Political determinants of energy policy formulation

Based on the interview material collected, we structure our analysis according to the most relevant energy policy objectives. We identify and group four main objectives critical to understanding Indonesia's current energy policy and its ongoing focus on coal. These include (1) the development of infrastructure (power plants, rural electrification, transmission and distribution networks), (2) fiscal sustainability (such as the reform of energy subsidies, while at the same time keeping low electricity prices), (3) securing the markets for the coal industry and (4) climate and environmental protection. Figure 15.1 presents an overview of these four main energy policy objectives against the share of interviewees in each interviewee category who mentioned that the corresponding objective is important for policy formulation (without necessarily implying that the objective matters for them). Table 15.1 presents an overview of objectives, actors and the contextual factors shaping the formulation of Indonesia's energy policy.

Figure 15.1 Share of interviewees naming the respective energy policy objective across each interviewee category.

Table 15.1 Objectives, actors and cross-cutting contextual factors of energy policy

Objectives of energy policy	Most relevant actors
Development of infrastructure (develop 35 GW power plant capacity increase rural electrification ratio to 100% by 2015)	President, Ministry of State Owned Enterprises, PLN and other SOEs
Fiscal sustainability (public budget reorganization, low electricity tariffs)	President, population, MOF
Secure markets for the coal industry (create domestic demand for coal)	Coal Mining industry, IPPs, GOI, key functionaries with vested interests in coal
Environmental protection and climate change mitigation (deforestation, local water and air pollution, GHG emission reduction, development of RE)	Ministry of Forestry and Environment, NGOs, international donors, population in coal mining sites
Cross-cutting contextual factors	
High SOE share in the economy and SOE-driven infrastructure development	
Decentralization and young democracy	
Corruption, lack of governance, sporadic nature of policymaking (ad-hockery)	
Historical legacy of natural resource extraction and resource nationalism	
Forthcoming national elections	

Source: Own elaboration.

Development of infrastructure

This subsection discusses why infrastructure provision constitutes a central objective for Indonesian policymakers and explains how SOEs are employed to reach this target.

Provision of infrastructure

Numerous interviewees [sn2, sn3, sn4, sn6, epun2, pn4, sn11, epun4] identified the provision of public infrastructures, such as power plants, roads, highways, harbors and airports, as the central priority in the political agenda of the Jokowi administration. Energy policy is embedded in this objective, with the two most prominent programs in the power sector, the rural electrification program and the 35 GW fast-track program, forming part of this. The 35 GW fast-track program for the power sector is a particularly important driver behind the massive increase in coal-fired power infrastructure.

In the context of the 2019 election, Jokowi's popularity was presumed to be judged against his ability to show progress in the 35 GW fast-track program and the rural electrification program. Ray und Ing (2016) as well as Warburton (2017a) assert that demonstrating success in delivering infrastructure and public services is pivotal and a critical test to the popularity of Jokowi, which explains the urgency behind the government's power sector investments. Regulatory complexity in Indonesia has historically constrained the involvement of the private sector in infrastructure investments (Kim 2018). For this reason, Jokowi's administration has aimed at attracting private investment by reducing bureaucracy, simplifying procedures to obtain permits and fostering deregulation. In 2015 and 2016, Jokowi announced ten economic reform packages, as well as plans for a "big bang" loosening of restrictions on foreign investment in nearly 50 sectors (Ray und Ing 2016). In 2017, MEMR presented a considerable reduction and simplification of permits and procedures required for the private sector's participation in the energy sector; whereas IPPs previously required hundreds of permits, they now only need ten permits for conventional electricity and six permits for RE projects.³ The effectiveness of these measures to attract private sector investments might be overshadowed by frequent unexpected policy changes ("ad-hockery") in Indonesian policymaking, creating an adverse investment climate for investors [ei2, sn8, si12]. In addition, the two most pressing obstacles for infrastructure development, land acquisition and access to finance, have not been addressed by Jokowi's administration (Damuri und Day 2015; Warburton 2017a; Kim 2018; Ray und Ing 2016).

The role of SOEs

Next to the simplification of permitting procedures to attract private investments, Jokowi's administration has actively relied on SOEs to implement his infrastructure agenda [ei2]. The president has referred to SOEs as the agents of

development and noted that their responsibility is to build as much infrastructure as possible (Kim 2018). Jokowi's administration changed the government's strategy toward SOEs, based on the belief that SOEs are able to quickly deliver infrastructure, fix market failures and support the fiscally constrained government (Kim 2018; Prabowo 2019). By acquiring loans, issuing bonds, revaluating assets and merging companies, SOEs are used to overcome budgetary restrictions, such as the 3% of GDP deficit limit imposed on the government (Nikkei Asian Review 2017; Prabowo 2019). In the power sector, this became visible in 2016, when MSOE pushed the strategy to revalue PLN's assets, replacing the previous valuation at purchase prices. New values were calculated retroactively to 2015, more than doubling PLN's assets from 539 trillion Rp. to 1,227 trillion Rp. within a year and making it possible to generate debt to finance its expenditures (New Mandala 2018). The MSOE, as shareholder of Indonesia's SOEs, hence represents a central actor within Jokowi's infrastructure agenda. Consequently, interviewed stakeholders referred to the MSOE as being "*the bank*" or "*owners of the country*" [SI6]. Similarly, numerous interviewees have described PLN as a powerful SOE, which is hard to regulate. One interviewee called PLN "*a very a muscly SOE*" [ei1], while another stated that "*If PLN is in conflict with the Ministry of Energy, they most likely get their requested outcome*" [sn3]. Interviewees explained PLN's power as due to being under "*a protective umbrella of MSOE*" [si7] and even characterized PLN to be "*more powerful than MEMR*", PLN's formal regulator [sn4].

The SOE-driven infrastructure development approach must be interpreted against the historical trajectory of state control over key industries. SOEs are easier to control than private companies (Prabowo 2019). There exists a trend toward the rise of resource nationalism in the energy sector, as an ideology among Indonesian policy (Mietzner 2015; Warburton 2017b; Aspinall 2016), and the latest 2009 Law on Mineral Resources and Coal is one prominent example. The law replaced the previous system of "*contract of work*" for foreign investment in mining projects (granting contractual security and a fixed royalty rate for a defined time period) with a system of licenses that can be revoked by the government with ease (Boyd et al. 2010; Lucarelli 2010). Furthermore, the law stipulates that foreign shareholders should divest a share of at least 51% by the 10th year of production and incorporates a ban on exports for non-processed mineral ores in order to incentivize the creation of local added value (Lucarelli 2010). Another example is the 2014 energy strategy, introducing the paradigm of using natural resources as *development capital*, while stipulating a coal production cap at 400 Mt per year (Table A15.1). If enacted, the coal production cap would limit export possibilities and prioritize the domestic market. However, the cap is ineffective so far and identified not to be of relevance in Indonesian energy policy (Cornot-Gandolphe 2017).

Fiscal sustainability

Indonesia's energy policy is shaped by the goal to reduce energy subsidies to free up financial resources for infrastructure investment, while at the same time

trying to maintain low energy prices. In the following, we discuss how both goals interact with coal investments.

Reorganization of the public budget

With Jokowi's administration prioritizing the development of public infrastructure, redirecting public budget for infrastructure development has become a domain of energy policy. The latest electricity and fuel subsidy reforms have been driven by the need to redirect a substantial proportion of public budget toward infrastructure development (Damuri und Day 2015; Yusuf und Sumner 2015; Ray und Ing 2016). While the infrastructure budget increased by more than 2.5 times between 2014 and 2018, energy subsidies declined to approximately one-third of their 2014 level, representing 5% of Indonesia's public budget in 2018.

PLN has gradually increased electricity tariffs as part of the broader energy subsidy reform. In line with the reform, PLN's budget for subsidies, allocated from the public budget, has been constantly reduced. However, in the context of the 2019 presidential election, the MEMR stipulated that electricity tariffs would not be increased during the 2018 and 2019 national electoral period, given the possible loss in popularity for President Jokowi that might result from raising tariffs [pn1, pn5]. Yet, the parliament has continued to reduce the subsidies budget allocated to PLN, requiring it to recover its costs under existing tariffs. These frozen electricity tariffs have put a substantial burden on the financial health of PLN [pn5] and PLN has lobbied MEMR to help reduce its costs. This has resulted in the implementation of the "domestic market obligation", stipulating that domestic coal must be sold to PLN at a maximum price of USD 70 per ton [epun1, pn1]. Furthermore, in the effort to reduce the costs of PLN, national feed-in tariffs for RE sources were abolished in 2017 (Table A15.1).

Maintenance of low electricity tariffs

With a perceived development lag behind more developed countries in the region, maintaining "affordable electricity prices" was widely reported to be a goal of current energy policy in Indonesia, both with regard to providing electricity cheaply to households [si1, si2, si3, si4, sn3, si6, si9, epun2, sn13, epun5] and as a requisite for industrial development [sn12, sn13]. This is also reflected by the 35 GW fast-track program to improve the electricity infrastructure for industry and the rural electrification program to improve access for the poor. Both of these programs represent electoral promises, while the provision of affordable electricity can be related to Jokowi's political narrative and image as a "*man of the people*" (Mietzner 2015). However, the energy subsidy reform, necessary for the government to redirect funds for infrastructure development, was feared, if mismanaged, to result in a loss of popularity in the 2019 election. Electricity tariffs must be adjusted automatically every three months to the price of oil, inflation and the exchange rate. Yet, with a letter by MEMR's Minister Ignasius Jonan to his staff, this automatic mechanism has

been paused, resulting in unchanged tariffs for the years 2018 and 2019 [pn1, sn9]. This change in regulation has been interpreted as being driven by the need to maintain popularity during the 2019 presidential election [pn1].

The provision of cheap and abundant electricity is seen by the government as a prerequisite to attract investors, maintain competitiveness and foster the industrialization of the country [sn12, sn13]. Furthermore, coal-fired power plants are considered the cheapest means to supply electricity, and thus to achieve the goal of sustaining low electricity prices [si4, si9, si13, sn12, sn13]. A high proportion of coal in the power sector plans is primarily attributable to its affordability compared to that of RE sources [epun3, epun5]. As stated by one interviewee, “*PLN carries on with what they want, regardless of what ministries say ... PLN will definitely do RE if costs are lower. It's purely costs*” [epun3]. Even though RE projects might represent a technical and organizational challenge, this is considered less problematic than the issue of costs [epun5]. Indeed, financing RE projects in Indonesia is substantially more expensive than for coal, particularly IPPs, which face high interest rates of well over 10% on debt for their projects. Land acquisition and the risk of a lack of stability in political regulations regarding RE support were regarded as the greatest barriers to raising finance for RE projects [si12, ei2, si10]. In addition, domestic banks were considered to lack experience with RE projects. Despite major differences, banks use the same risk-assessment schemes for RE projects as conventional power projects [si10].

Secure profitability of the coal industry

Coal, in particular coal mining, is an important economic sector in Indonesia that largely contributes to the government's budget. It is highly influential in national and local politics [sn1, ei2, sn4, sn10, sn13]. Arguably, in Indonesia, coal is not only promoted for economic reasons but also through political pressure resulting inter alia from vested interests. Coal receives political support as a means to generate public revenues at various levels and accelerate regional development.

Creation of domestic coal demand

Coal mines are highly concentrated, with the biggest six companies accounting for 70% of domestic sales and 60% of exports (Lucarelli, 2018). Exports to India and China dropped significantly in recent years, respectively, creating uncertainty regarding the future of major export markets. Indonesia's coal mining industry has identified the expansion of the domestic market as a way to secure its future demand (Harrington 2017), confirmed in our interviews [epun1]. Interviewees asserted that the high proportion of coal in the 35 GW fast-track program resulted from the efforts of the coal mining lobby [sn1, sn3]. In particular, during a time when coal export markets were decreasing, the coal industry sought political support to secure its existence: “*Jokowi's 35 GW was a*

reaction to low coal market prices suffocating the industry” [sn3]. Thus, the relatively low costs of coal, the infrastructural agenda driving the general deployment of power plants, vast reserves of coal in the country and a narrative of economic nationalism all support the coal lobby’s interest in energy policy [sn13, sn5].

The coal mining industry also plans to diversify its business model or maximize the coal production rate. Representatives of one of Indonesia’s largest coal producers stated that they understand themselves to be a diversified energy company and they would invest in RE, given a good business case [epun2]. Similarly, an interviewee stated that the coal mining industry is more concerned about getting into the RE business than trying to block its emergence [epun3]. Diversifying their business model into the wider provision of energy services was reported for be partly driven by the risk of global commodity price fluctuations to undiversified mining companies [sn1, epun2, si13]. Finally, in view of changing energy markets, some coal mining companies were reported to maximize their current production rate within their concession area to liquidate their assets.

Public revenue from coal royalties

Maximizing public revenue collection from coal, oil and mineral resources’ production is a major goal of Indonesian energy policy, which gives the government an incentive to support coal production. Every year, a national non-tax public revenue (primarily through royalties) collection target related to coal and mineral resources is imposed on MEMR by the parliament and MOF. In 2017, this target amounted to approximately IDR 33 trillion, up from IDR 27 trillion in 2016. The significant drop in global oil prices in 2014–2015 combined with a declining oil and gas output in Indonesia led to royalties from oil and gas significantly declining (from IDR 78 trillion in 2015 to IDR 44 trillion in 2017) (Reuters, 2018). In contrast, the production price for Indonesia’s benchmark thermal coal (Harga Batubara Acuan) has steadily increased from USD 49 per ton in 2008 to USD 87 per ton in 2017. Consequently, coal-related royalties are seen as a way to replace declining oil revenues (Reuters, 2018). With coal royalties representing 13.5% of the sale price, coal production is largely determined by the public revenue target. A representative of the local government in the province of East Kalimantan, where nearly all Indonesian coal is produced, stated that the number of coal mining licenses is altered to support target achievement [pn6]. In the context of fiscal decentralization,⁴ coal mining represents a profitable activity for resource-rich regions that can retain a substantial share of the public income generated. In particular, 32% of coal royalties accrue to district government, 16% to the provincial government, 32% to other district governments in the province and the remainder to the central government (Art. 15 of Law No. 33/2004). With East Kalimantan and South Sumatra having nearly all the coal reserves in the country, these provinces and their internment districts are independent of national revenue-collecting targets, a strong incentive to develop coal.

Private profits and vested interests

Key political functionaries reportedly own assets in the energy and mining business [si11, sn6, sn7, si12, sn10, sn11, si13]. One key player is Luhut Binsar Pandjaitan, former business partner and key supporter of Jokowi, who was Coordinating Minister for Maritime Affairs during Jokowi's first term (the coordinating ministry with oversight of the Ministry of Energy and Mines). More specifically, depicted as an all-powerful political tsar (Baker, 2016), he was the owner of the energy company PT Toba Sejahtera that holds significant assets in the coal mining business. He is also the uncle of the executive director of the coal mining association [si13]. Similarly, Bumi Resources, one of Indonesia's largest coal mining companies (Lucarelli 2010), is majority owned by Aburizal Bakrie, one of Indonesia's most politically influential figures, a Minister during former President Yudhoyono's administration and chairman of the Golkar party (Jotzo 2012).

Members of Indonesia's Parliament, particularly Commission VII, which is responsible for energy policy, reportedly own coal mining assets and thus have vested interests in coal mining [sn7, pn3]. Jokowi has not risen through traditional⁵ power structures. He is depicted as being close to established powerful players with vested interests in order to secure his political power (Power 2016; Warburton 2017a; Baker 2016; Mietzner 2015; Bland 2019). During the 2014 election, Jokowi received financial and political support from Rini Soemarno, Minister of State Owned Enterprises, Luhut Pandjaitan, Minister of the Coordinating Ministry for Maritime Affairs, as well as Amran Sulaiman, Minister of Agriculture (Power 2016). As noted by Warburton (2017a), the president placed key enablers and financiers at the country's most lucrative sectors. Vested interests and corruption are widespread and widely known to Indonesia's public: Indonesia's anti-corruption commission "KPK" has actively investigated several cases of corruption in the energy sector (Reuters 2015, 2009; Mongabay News 2017). Most recently, Sofyan Basir, PLN's managing director, was at the center of attention of a corruption case involving businessmen and members of the Parliament (National Kompas 2018). Vested interests of political functionaries, as well as corruption cases, have also been picked up by popular media (e.g. Laksono und Supart 2019).

Regional development

In the context of decentralization, in which provincial or district governments have distinctive rights to provide coal mining permits and evaluate environmental impact assessments, the coal mining industry is highly influential. The coal mining industry was reported to be the main financier of electoral candidates in East Kalimantan, thereby guaranteeing political support [sn10, sn11]. In the context of fiscal decentralization, a mutual dependence exists at the local level, as provincial and district governments profit from coal-related public revenue collection, while coal miners seek favorable conditions to operate.

Over 4000 mining permits issued by local government entities were subject to revision and have already been partly revoked, which prominently exemplifies the repercussion of misaligned incentives at the local level (Reuters 2015, 2009; Mongabay News 2017). Law No. 04/2009 on Minerals and Coal Mining initially stipulated that district governments have the authority to issue mining permits. However, responsibility for the issuance of permits was revoked at the district level in light of the issuance of foul mining permits and returned to the provincial and national levels (Anderson et al. 2016).

Climate and environmental protection

The existing national energy plan can be regarded to be aligned with the ambition to reduce emissions in the energy sector by 19% below BaU by 2030 (or 315 MtCO₂eq) by means of RE targets and higher efficiency coal-fired power plants. The national energy plan regards domestic energy resources as national development capital. It therefore frames this energy mix target in the context of achieving energy independence and creating added value in the country, thereby strongly relying on domestic coal resources to expand the power sector. This is reflected in the NDC's BaU scenario, which assumes a future expansion exclusively based on coal.

With regard to the lack of support for RE power generation and nearly no uptake of RE power plants up to date, interviewees have regarded the existing RE target as being rather symbolic [si2, sn3, sn9, si13]. As a means to achieve the target, feed-in-tariffs were introduced under Energy Minister Sudirman Said in 2016 [si2], yet abolished in 2017, after the Ministry was taken over by Minister Ignasius Jonan [si2, sn3]. Constantly changing regulations are regarded as the most challenging factor preventing IPPs from participating in the RE sector [ei2, si12].

In 2015, the Ministry of Environment and the Ministry of Forestry were merged into the Ministry of Environment and Forestry (MOEF), and a Directorate General of Climate Change Mitigation was established (van Tilburg et al. 2016). However, a senior representative of the same Ministry [pn2] reported that MOEF has virtually no influence in energy policy, as they do not belong to the overseeing ministries of PLN. Numerous stakeholders underlined the lack of relevance of MOEF in energy policy formulation. As forest and peat fires due to land clearing for oil palm plantations have released massive GHG emissions in the past (see Figure A15.2), climate change mitigation has historically been regarded as a domain of forestry and agricultural management. This is also reflected in Indonesia's NDC, in which the largest share of total mitigation is projected to be achieved in forestry. The fact that government reports project strong growth of energy sector emissions (e.g. MOF 2009) suggests that Indonesian policymakers are well aware that coal-fired power plants will be the biggest source of GHG emissions in the near future. Nevertheless, climate protection is narrowly framed by Indonesia's government as a forestry issue [sn1, sn3, pn2]. Representatives of key ministries, including the MEMR, MOF and MOEF, have confirmed that

the energy sector currently is not regarded as central for climate change mitigation [sn1, pn1, pn2, epun3, si13, epun4] (MOEF 2016).

International development agencies and NGOs are active in the field of climate protection in the energy sector, particularly by supporting the development of RE. However, they are considered to have a negligible influence in Indonesia's energy policy [si2, si3, sn3, si6, si8, si11, sn6, sn7]. A growing civil society movement and NGO network that criticizes coal mining and the construction of new coal power plants have emerged over recent years and contributed to changing public attitudes, as well as to the evaluation and revoking of mining permits (Fünfgeld 2019).

There is little awareness of coal-induced local pollution-related risks and the adverse effects of climate change within the broader population [si5, si9, si13]. Coal mining sites often do not comply with environmental and safety regulations, due to the combination of a highly influential coal mining industry and local governments subject to a low degree of law enforcement, corruption and money politics [sn10, pn6, sn11] (Fünfgeld 2016). Strong protests against coal-fired power plants have been observed in other Southeast Asian countries, most prominently Thailand (IEA 2018). In Indonesia, civil society's opposition to the proximity of coal mining sites and coal-fired power plants has not widely resonated in media and politics [si5]. With low political pressure and virtually no popularity losses expected by leaving this policy domain unaddressed, politicians have little incentive to foster a sustainable development path [si9].

Discussion and conclusion

We identify the provision of public infrastructure as the overarching goal of the Indonesian government, which leads to the expansion of power plants in the energy sector. To achieve this objective, energy subsidies were reduced and financial resources were redirected to infrastructure investments. The contribution of coal mining to value-added creation and its royalties to the public budget create a strong incentive for the national and local governments to sustain the profitability of the coal industry. As a consequence, all three ministries governing energy policy (MEMR, MSOE and MOF) have incentives to support the extraction and use of coal (Figure 15.2). The MSOE, as shareholder of Indonesian SOEs, executes the presidential agenda, delivering public infrastructure through SOEs. As shareholder of PLN, the MSOE aims to improve the financial performance of the loss-making utility by minimizing its costs. The MEMR, officially regulating PLN, has prevented tariff increases due to popularity concerns in light of national elections. Reducing system costs by favoring coal remains the most practicable option for PLN. The MOF, in charge of Indonesia's public budget, has an incentive to secure the collection of royalties from coal as a source of public revenues. Similar incentives at the subnational level result in resource-rich provinces, such as East Kalimantan and South Sumatra, developing coal mining as a key economic activity and source

Figure 15.2 Schematic overview of actors and incentives leading to coal development. Source: Own elaboration.

of public finance. Lack of law enforcement capabilities at the local level and corruption further aggravate this political bias.

Oligarchic structures and blurry lines between the political and the economic elite related to coal and natural resources are widespread in Indonesia. Vast reserves of coal in the country, a narrative of resource nationalism, the paradigm of energy resources as development capital, and the government's focus on infrastructure provision are supportive conditions for the coal lobby's interest to resonate in energy policy. Therefore, it is no big surprise that environmental and climate protection are often framed narrowly as a forestry issue, despite the government's documented awareness of the adverse effect of promoting coal on GHG emission reductions. Hence, the BaU scenario in Indonesia's NDC largely reflects Indonesia's national strategy to foster coal, which is highly detrimental to efforts to achieve global carbon neutrality by the mid of the century.

In Indonesia, there is limited public awareness of the substantial externalities that accompany coal use, both with regard to climate change and also in terms of local pollution and health. In terms of local pollution and health, civil society opposition to coal mining sites and coal-fired power plants has had a limited resonance in media and politics and thus does not provide substantial opposition to the development and use of coal. Acknowledging the adverse effects of coal use and empowering affected communities could provide additional political momentum to shift away from coal toward cleaner energy sources.

The reliance on coal impedes a discussion on how a (just) transition away from fossil fuels can be achieved. To date, coal use is seen as a way to reduce poverty, promote industrialization, create domestic value added and develop regions, which otherwise would lack economic perspectives. In contrast to other countries, such as India or South Africa (Montrone et al. 2021; Strambo et al. 2019), in Indonesia, employment in the coal sector (or fear of job losses) plays a minor role in promoting coal and was barely mentioned in our interviews. Also, energy-intensive industries (e.g. such as steel, cement or chemical industries) other than extractive industries were not referred to by interviewers as influential actors of energy policy.

Arguably, the institutional change required to govern Indonesia's energy sector in a sustainable way (e.g. incorporating the Ministry of Forestry and Environment with the ministries overseeing PLN, reforming PLN to reduce its propensity to political capture) cannot be brought about in isolation. Rather, reforms to prevent continued lock-in to coal-fired capacities will only be successfully implemented as part of a broad-based effort to curb corruption and increase the institutional capacity of regulating bodies overseeing Indonesia's energy policy and its power sector.

As the political elites derive sizeable rents from coal use, climate change mitigation measures can be expected to face severe political resistance. As PLN may be unable to raise electricity prices, climate policy that potentially increases electricity prices could also face substantial resistance from PLN. Likewise, the ministries overseeing PLN might as well oppose climate measures. Carbon pricing could constitute an entry point for more ambitious climate change mitigation. The MOF might support such a policy, which could provide sufficient revenues to compensate for the loss of coal royalties. Redirecting revenues from carbon pricing to regions that are heavily reliant on coal mining could also help to support structural change and provide a perspective for regional economic development.

Steadily declining costs of RE technologies could further change the government's perspective on how to satisfy the goals of delivering infrastructure, cheap electricity for the population and industry, as well as climate and environmental protection. Enabling access to cheaper finance and implementing attractive support schemes remain pivotal in the move away from coal, especially in view of the reported high financing costs for RE projects in Indonesia. Support schemes, such as feed-in-tariffs or financing schemes, could address this problem and allow energy companies that are either already diversified or willing to diversify their technological portfolio, to create a business case for renewable energies. However, this would also reduce the coal-related rents of politically influential actors, which might oppose reforms. To ensure their buy-in, some form of compensation might be necessary.

The successful implementation of climate mitigation policies in the energy sector will hence depend on the extent to which concrete policies harm coal incumbents in the private and public sector, as well as the effectiveness of efforts to diminish the influence of the coal lobby on energy policy.

Grants

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Appendix

This chapter contains supplementary online material at <https://www.mcc-berlin.net/pecoal/ch15>.

Notes

- 1 This chapter draws on the article Ordonez et al. (2021). We gratefully acknowledge permission to reproduce parts of the content from Elsevier.
- 2 The online appendix contains an overview of energy and climate policies.
- 3 According to MEMR Reg. No 35/2014, similar reductions were stipulated in the minerals and coal mining sector, and permits were reduced from 117 to 6 (MEMR Reg. No. 34/2017).
- 4 In 2001, the country went through a large-scale decentralization process. The country was divided into a total of 82,330 local government entities, 34 provinces, 99 cities, 410 regencies, 6,543 districts and 75,244 villages (IEA 2015). Local governments acquired power in decision-making in areas such as raising revenue (e.g. royalties and land taxes), issuance of mining permits and assessment and regulation of environmental impacts.
- 5 In Indonesia represented by the military, political families, bureaucracy or mass religious organizations (Mietzner 2015).

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