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The geopolitics of renewables in Kazakhstan and Russia

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Abstract
This article examines recent renewable energy initiatives in two hydrocarbon rich states of Eurasia: Kazakhstan and Russia. The global nature of challenges surrounding energy and natural resource use demand that sustainability and "energy transition" policies be understood as geopolitical issues, which are increasingly (re)defining political relations among and within states. Existing research and media coverage of international energy politics in Eurasia is overwhelmingly dominated by a focus on oil and gas extraction, especially in Kazakhstan and Russia, due to their central place in traditional hydrocarbon fuels markets. As elsewhere in the world, however, political and economic leaders in both countries have started to adopt the language of promoting environmental sustainability, the "green economy," and renewable energy infrastructures. Taking a critical geopolitics lens to recent developments, this article considers who is involved in advancing renewable energy in contexts that have traditionally been dependent on traditional energy sources, and what this may portend for the shifting energy landscape of Eurasia.

Keywords: renewable energy; energy transition; energy geopolitics; extractivism; Eurasia

Introduction

Environmental issues have always been geopolitical, but in response to global efforts to address climate change, new "energy transition" policies are beginning to play an increasingly important role in (re)defining political relations among and within states. Extensive media and academic attention has been dedicated to the pioneering countries, organizations, and international frameworks advancing new energy agendas beyond hydrocarbons. Yet some countries are *not* heralded as being at the forefront of the push to rethink energy economies, either quietly ignored or, worse, openly stigmatized as holdouts or oppositionists to a new, greener, cleaner future. This article considers the case of two such countries, Kazakhstan and Russia – both of which have troubled reputations regarding environmental policy, largely due to their central place in traditional hydrocarbon fuels markets. Leaving aside the truth of this characterization, we show that Russian and Kazakhstani leaders have in fact begun to introduce a number of sustainability initiatives. In Kazakhstan, for example, the country recently hosted EXPO-2017, a second-tier World's Fair, with the theme of "Future Energy," while in Russia, 2017 was named "Year of the Environment." Iconic or exceptional as these high-profile projects may be, they are part of a wider effort to promote particular forms of environmental sustainability in Russia and Kazakhstan. In fact, leaders in both countries are now advocating for wide-ranging investments in alternative energy infrastructures, "green economy" development, and certain forms of environmental citizenship.

Taking the case of renewable energy alone, we see that their efforts are often diffuse, short-lived, small-scale and flashy, *but real nonetheless.* They are also puzzling: how and why are renewable energy policies being promoted, when both Kazakhstan and Russia's political economies are still so tied to traditional energy extraction? Do new alternative energy projects mark a sea change of promoting "future energy" transitions in Eurasia? Or do these projects risk further entrenching hydrocarbon dependency in Kazakhstan and Russia? Whose interests are at stake in such transitions? And how might recent renewable energy initiatives support or challenge prevailing political configurations in Kazakhstan and Russia? This article cannot fully address all of these important questions, but we hope to open them up to further research by comparing the two states' changing energy geographies and to reflect on what insights

they might offer about the broader geopolitics of renewable energy, not just in Eurasia and other states with large hydrocarbon reserves, but around the world.

The geopolitics of renewables

In *The Geopolitics of Renewables,* Daniel Scholten (2018b, 1) writes, "This transition towards renewable energy represents a game changer for interstate energy relations." Geopolitics is, of course, as much an issue of domestic politics as international politics. But when indexing *global* geopolitics, it is clear that efforts to promote renewables are increasingly factoring into how political leaders presiding over large hydrocarbon export sectors seek to position their states in the regional and international sphere. This is an important issue for scholars of the post-Soviet states because scholarship and media coverage of international energy politics in Eurasia is overwhelmingly dominated by a focus on oil and gas extraction, pipelines, as well as more diffuse infrastructures facilitating hydrocarbon exploitation (e.g. Anceschi 2017; Bedeski and Swanström 2012; Domjan and Stone 2010; Ericson 2012; Gilmartin 2009; Graybill 2017; Koch 2013; LeVine 2007; Marten 2007; Øverland, Kjærnet, and Kendall-Taylor 2010; Rogers 2015; Schmidt-Felzmann 2011; Stulberg 2005; Tynkkynen 2017).

While this work has been tremendously valuable – and will continue to be for many years to come – we aim to expand the scope of the literature on energy geopolitics in post-Soviet Eurasia to bring more attention to the region's renewable energy sector. Scholarship on renewables and the energy transition has expanded rapidly in recent years, but Eurasia is skipped over entirely in several key new volumes on the topic (e.g. Aklin and Urpelainen 2018; Scholten 2018a; Scoones, Leach, and Newell 2015). Through the joint analysis of recent projects in Kazakhstan and Russia, this article also contributes to this wider literature on energy transitions. Much of the existing research has tended to focus on "bottom-up" renewable initiatives, linking energy, democratization, and development (for a recent review, see Burke and Stephens 2018).

In this article, by contrast, we join Sonnenfeld and Taylor (2018) in calling for more attention to environmental challenges in "illiberal" states. As they note, "contemporary social theory of the environment emerged during the 20th century in close engagement with, and frequently in critique of, classical Western liberal values that include the rights of individuals, citizenship, pluralism, representative democracy, etc." (Sonnenfeld and Taylor 2018, 515). The professed rights and values of liberal democratic states are not consistently experienced by all residents, of course, but there are large differences between norms and forms of subjectivity and civic engagement in states with political systems falling on opposite ends of the liberal versus illiberal spectrum (Koch 2018b). As such, analysts of the global energy transition need to take political geography seriously – and doing so requires recognizing that "liberal states and institutions coexist with, and are at times overshadowed by, illiberal counterparts, rivals, and critics," but that *all* states today "face increased calls for environmental intervention, often even over the rights of individuals, communities, and dependent territories" (Sonnenfeld and Taylor 2018, 515).

There is, in fact, a rapidly expanding body of research on state-led efforts to introduce renewable energy (e.g. Crot 2013; Freeman 2018; Gallagher 2013; Grydehøj and Kelman 2017; Luomi 2012; Simpson and Smits 2018), upon which this article builds. In particular, we adopt a critical geopolitics lens to examine precisely how renewable energy is being advanced in the nondemocratic states, who is benefiting, where and how. Rather than emphasizing value judgments, critical geopolitics-as-method pushes us to ask instead, who is promoting renewable energy in Russia and Kazakhstan and with what effects? We are also interested in why specific actors in the two countries might be doing so, but this is a methodologically tricky task – not just because actors are always operating with multiple motives, but also because the energy sector is a particularly closed off from outside investigation, and doubly so in authoritarian states like Russia and Kazakhstan.

As long-time scholars of the two countries, however, we able to draw from a deep background knowledge about their energy sectors and pair this with a systematic reading of relevant texts. Each author conducted an extensive review of these texts from 2013 – 2018, which we archived in separate databases of approximately 100 documents/country. Texts were collected and coded in Russian and

English, languages in which both authors are fluent, and stored in an online, searchable archive in Evernote. While we initially examined documents dating back to 1991, when the two countries gained independence, our analysis showed that it has only been within the past 5 years that the renewable energy sector has figured so prominently in the countries' public discourse. As such, these documents were the focus of our analysis, and included speeches from presidential and government websites, newspaper articles (e.g. *The Astana Times, Novaya Gazeta*), energy trade publications (e.g. *PV-Magazine*), reports from various international organizations (e.g. World Energy Council, UNDP, EBRD), etc.

In analyzing these publications, we sought to understand both the policies being articulated and the prevailing discourse around renewable energy, by drawing out common threads, themes, and storylines. This approach is rooted in discourse analysis (Dittmer 2010), which has been common to much work in the field of critical geopolitics, which approaches geography not as a "natural given but a power-knowledge relationship" (Ó Tuathail 1996, 10). Our analysis also builds on the work of Tynkkynen and Tynkkynen (2018) and other scholars who emphasize the need to examine *public discourse* around climate change in states like Russia, where a free press is largely absent (see also Koch 2014, 2015, 2018b; Luomi 2012; Poberezhskaya and Ashe 2018; Ren 2012; Smeets 2018; Wilson Rowe and Blakkisrud 2014). These studies acknowledge the dual opportunities and limitations of such discursive settings for scholars: one the one hand, we cannot uncover the "truth" about elite motivations, but we can nonetheless glean important clues about state priorities by analyzing state-sanctioned narratives and tracing prominent political and economic networks involved in shaping environmental policies. Indeed, there is much to be learned from exploring the policies themselves and investigating who the relevant actors are in the unfolding story of renewable energy in Russia and Kazakhstan. Furthermore, the comparisons we are able to make by considering the two countries together offer some insights on contrasting motives shaping the two countries' separate but converging paths toward increasing renewables in their national energy supplies.

Why promote "sustainability"?

"Kazakhstan, despite its huge hydrocarbon reserves, will actively switch to renewable energy sources. This goal is set in our Strategy-2050 and the Concept of changing for a 'green economy.' By 2050, Kazakhstan can produce half of the total electricity through renewable sources," President Nursultan Nazarbayev thus opened the EXPO 2017 with an optimistic vision for Kazakhstan's transition to a renewable energy future (quoted in *Akorda* 2017). In 2009, the Russian government set a goal for renewables to reach 4.5% of its electricity mix by 2020 (Smeets 2018) – an ambitious target at the time, but certainly absent the "wow" factor of what Nazarbayev had promised. As he emphasized in his EXPO opening speech, the "National Concept for Transition to a Green Economy" set a bold timeline to move Kazakhstan from under 1% renewable energy sourcing when it was adopted in 2013, to 3% by 2020, 30% by 2030 and 50% by 2050. In a country where approximately 87% of its electricity is generated from hydrocarbon-powered plants (75% coal-fired stations and 12% gas-fired plants, and the remainder coming from hydroelectric power stations), these numbers are flashy, clean, and counter-intuitive: just the thing to catch the attention of foreign investors. These sorts of directed messages are easily consumable by foreign audiences, who are indeed their target: the desire to attract foreign investment goes a long way to explaining Kazakhstan's iconic sustainability initiatives. Yet there are many other actors who are involved in the story behind their growing prominence.

As scholars and critics have long observed, sustainability is a "hazy" concept (for a recent "biography" of the concept, see Mulligan 2018). It is an easily contested concept in large part because, in real life, there is never a situation when an institution, community, process or policy can be fully sustainable. Given its explicit multi-dimensionality, the idea of sustainability has an in-built "imbalance" due to the fact that the content is in the end defined in the specific socio-ecological setting. Yet this sprawling reach is precisely what makes sustainability so powerful. A wide range of actors use the concept to promote an equally wide range of allegedly pro-environment policies. In Russia, though, it has never been a popular term. When "sustainability" first started to gain momentum in the West – from the 1990s onwards – there have been critical accounts of the concept's applicability to the Russian context,

despite the fact that Russia has signed the key sustainability documents developed under the auspices of United Nations (Oldfield and Shaw 2002).

The main "problem" with sustainability discourse for Russian critics can be found with its social dimension and, in particular, its emphasis on giving voice to local communities to define the course of action concerning the use of space and natural environments (Tynkkynen 2009). The liberal ideal, built into the concept of sustainability, is at largely at odds with the authoritarian power structure, which has come to prevail in independent Russia under President Vladimir Putin. It is not only the situatedness on the authoritarian-liberal axis that has an impact on the acceptability of the globally-agreed concept, but also has to do with deeper epistemological issues, such as what accounts as environmental knowledge that is to be used in planning for sustainability. This, again, is linked to the ideal of an objective (positivist) science, that has a hegemonic position in the academic world and, therefore, policy-advice processes in the post-socialist space (e.g. Tynkkynen 2010). However, sustainability has entered the corporate world to the extent that major Russian companies in extractive industries (including oil and gas) produce sustainability reports on a yearly basis.

The rationale of Russian actors and institutions to speak about sustainability is, we believe, linked to the concept of democracy. The way democracy is mimicked in Russia – elections are held, multi-party system is in place and independent NGO's exist, yet all are checked and controlled in a growing fashion by the present regime – suggests that the idea of democracy has a legitimizing role for those in power. Thus, to gain acceptance globally and domestically, Russian leaders have tried to show themselves to be democratic, as well as sustainable in their social and economic policies. Yet the policies that Russian fossil-energy companies promote are ultimately examples of so-called weak sustainability ("non-sustained yield"), as energy industries based on extraction of non-renewable resources can never per definition promote strong sustainability ("sustained yield") (Tynkkynen 2007, 865). Therefore, due to the very different and practically non-interchangeable conceptual starting points on sustainability of non-renewable and renewable energy industries, they employ narratives and practices of very different nature. Mirroring the implicit weak-sustainability mentality in fossil-energy industries in Russia, in official government policies and programs, as with the "Year of the Environment 2017," the talk is about the *environment* and *pollution*, and not about the societally and socio-economically-loaded term, *sustainability*.

In Kazakhstan, environmental issues are not central to wider public discussions either, and environmental policy has developed in a decidedly top-down fashion – despite the country's important history of grassroots environmental organizing at toward the end of the Soviet times, especially around the Aral Sea disaster and the nuclear testing in Semipalatinsk (Weinthal 2002). This has led to a great deal of foreign skepticism about the country's recent focus on renewable energy (prominently broadcast at the EXPO 2017), clearly illustrated in a recent article in *The Diplomat*, "The real future of green energy in Kazakhstan: Given the dominance of conventional energy resources, are Astana's green energy reforms merely publicity stunts?" The title itself is telling, and like the vast majority of Western commentators, the author concludes that despite the government's ambitious rhetoric, that "viability of such projects is limited, indicating a more immediate motive of projecting the image of a forward-looking Kazakhstan before Western audiences" (Fernandez 2018). Promoting the image of modernity is no doubt a crucial part of the story, just as it is with all actors who "greenwash" the image of their company, state, or person (Koch 2014, 2018a). Yet it is insufficient to stop at this simplistic critique: policymakers, scholars, and other observers cannot afford to dismiss these initiatives as a farce because, as we discuss below, real changes are occurring in Eurasia's renewable energy landscapes. The growing *amount* of rhetoric alone highlights that there are important transformations underway in both "energy superpowers" of Eurasia – and the similarities between Kazakhstan and Russia are just as telling as their differences.

Who is promoting renewable energy?

In both Russia and Kazakhstan, using the language of sustainability has been, to some extent, part of the state and corporate sectors' effort to align themselves with the globally-dominant narrative about promoting "green economies" and thus promote an image of the countries as modern and investment-

friendly. This image-consciousness is arguably stronger in Kazakhstan, which has consistently accorded more importance than Russia to gaining Western approval since independence in 1991 (Koch 2018b). But to understand why Russia and Kazakhstan are home to a growing (if disparate) number of sustainability projects, it is necessary to first examine some commonalities and differences around *who* is promoting renewable energy in the two countries. As noted in a recent study on barriers to renewable energy adoption in Kazakhstan, the country faces a formidable set of challenges:

> non-renewable energy production priorities; high technical losses; the current state of the existing electricity infrastructure; long-distance transmission and its associated losses; a lack of infrastructure for new energy technologies (e.g. low availability of energy storage systems); top-down management structures within energy sector; the economic cost of electricity production and tariff systems; competition and corruption; high capital investment costs; local knowledge, skill shortages (for design and development, manufacturing, installation, operation and maintenance) and research & development support; poverty and low household affordability. (Karateyev et al. 2016, 127; see also Karateyev and Clarke 2014)

This litany of challenges underscores the need for actors – not only with high specialized skillsets, but also with a big enough stake in the game to make it worth their time, energy, and resources. While many of these challenges are shared in Kazakhstan and Russia (Lanshina et al. 2018; Smeets 2018), the actors with a big enough stake differ substantially. We cannot cover them exhaustively, but the most relevant groups are domestic political and economic elites, foreign corporate actors, and international organizations.[1]

Kazakhstan

In Kazakhstan, the United Nations Development Programme (UNDP) has been involved in some small-scale projects promoting renewable energy, but the most important actor in fostering the country's renewable energy transformation is clearly the European Bank for Reconstruction and Development – objectively and from the bank's own account (EBRD 2016). Beginning in 2008 with the signing of a "Sustainable Energy Action Plan" to outline various joint actions, the EBRD then worked with Kazakhstan's government to introduce its first legal framework in 2009, the Law on the Use of Renewable Sources of Energy. The law was quickly judged as insufficient because it lacked a regulatory component and a feed-in tariff system. Without this, renewable energy producers could not realistically be expected to compete with traditional fuel supplies, who have long been (and continue to be) aided by artificially low electricity prices thanks to generous state subsidies (Wheeler 2017). Just as in Russia, this has been a major deterrent to developing renewable energy infrastructure (as has been currency instability, as discussed below). With more legislative support from the EBRD, Kazakhstan introduced a new tariff system in 2013, which guarantees a competitive market for renewable energy producers for 15 years. In addition to exempting renewable energy producers for electricity transportation costs, the same law established the "Cost Clearing and Settlement Centre," which centralized the purchase and sale of renewable energy generated by renewable energy facilities.

The EBRD has also provided the lion's share of financing for most of Kazakhstan's large-scale renewable energy projects. This includes the country's first large-scale wind power project in northern Kazakhstan, Yereymentau, which was supported in 2014 with a $70 million loan, to which $21 million was contributed by the Clean Technology Fund (CTF) (an investment fund that supports developing states in their efforts to "to scale up low carbon technologies with significant potential for long-term greenhouse gas emissions savings"). The EBRD has also partnered with the CTF to support two major solar projects in Zhambyl in southern Kazakhstan, Burnoye Solar-1 and Burnoye Solar-2 (50 MW each), including an $80 million loan in 2015 and $44.5 million in 2017 (Bellini 2017). Financing for these projects has also come from Samruk-Kazyna Invest, an investment arm of Kazakhstan's sovereign wealth fund and United Green, a private British strategic investment group, while the loans have been guaranteed

by Samruk Energy, Kazakhstan's national energy company, which, according to the ERDB, has seen these solar initiatives as a way to diversify its portfolio.

A diverse portfolio is also of interest to Kazakhstan's energy decision-makers, not just in terms of sourcing, but also in terms of international investment. Political leaders especially emphasize the potential of renewable energy projects to attract FDI and they consistently highlight the involvement of foreign firms – potential and real. "A number of domestic and foreign companies, including ACWA Power (the Kingdom of Saudi Arabia), Sky Power (Canada), Shell, General Electric (the USA) and Goldwind (China) expressed their desire to participate in the auction," proclaimed a government statement regarding a 2018 renewables auction (quoted in Bellini 2018). Luring potential investors to Kazakhstan's renewable energy sector is a goal in itself for political and financial elites, but they also clearly hope for these high-profile "green economy" projects to generate a broader FDI ripple effect. This was particularly apparent in government rhetoric around the EXPO 2017 event, infused as it was with the green economy trope. For example, Minister for Economic Integration Zhanar Aitzhanova, who also led Kazakhstan's negotiating team to enter the World Trade Organization, proclaimed:

> Today, the world needs new, environmentally safe, pathways for development. Kazakhstan has already set its course towards a green economy. We consider that a discussion about future energy is one of the most universal discussions of our time, which is precisely why we have chosen it as the central theme for EXPO 2017. (quoted in Sieff 2017).

Leaders like Aitzhanova clearly understand the importance of leveraging narratives about environmental sustainability, not only to position Kazakhstan as a moral leader, but also to entice FDI.

Enticing FDI to such an underdeveloped sector as renewable energy in Kazakhstan is no easy task, however. Here again, the EBRD has proven instrumental. In May 2018, a major Chinese solar panel manufacturer, Risen Energy, signed a mandate letter for a 63MW solar project in Kazakhstan – making it the second for the company (the other being 40MW) to receive funding from the EBRD. Described in a recent report from the Dutch Embassy in Kazakhstan on the country's energy industry, EBRD's backing is said to be key to supporting Risen Energy in entering Kazakh solar market and according to Zhang Jieling, the company's director of project finance and investment:

> The partnership with EBRD opens a new chapter for Risen Energy's international project financing plan as it represents both a qualitative leap for and a significant step in the company's international expansion strategy. Ties with international multilateral organizations such as EBRD provide the company with a valuable opportunity to enhance its competence in and strategy for the development, financing and technology services of international projects. (quoted in Koninkrijk der Nederlanden 2018).

While Risen Energy will be the first Chinese solar company working in Kazakhstan, the EBRD has also promoted the involvement of other foreign solar companies, such as a $26m solar loan in 2016 for the Indian company, ACME Cleantech Solutions (Clover 2016).

The scope of investment from a wide array of Chinese and Indian companies, state-backed and otherwise, has understandably caught the attention of many observers of Central Asia (this is especially prominent in the literature on Eurasian energy politics discussed above, but for a broader discussion, see Laruelle and Peyrouse 2013). Connections between the post-Soviet states and the Gulf states of the Arabian Peninsula have, by contrast, have received little scrutiny to date, despite proliferating rapidly, including in the renewable energy sector (Koch 2017). As with the other renewable energy projects in Kazakhstan, these have centered on the solar power industry. Kazatomprom, one the world's leading uranium producers, has been active in this sector, as it has sought to "green" its image. This was made especially clear in the press surrounding an agreement with Qatar Solar Energy (QSE), signed by Azat Betekbaev, then Chairman of Kazatomprom's solar division. The 2014 agreement, and a subsequent one in October 2015 reportedly making Kazatomprom a "strategic shareholder" of QSE, was essentially an

agreement for Kazakhstan to supply silicon for solar modules to be manufactured in Qatar (Karimova 2015; PRNewswire 2014).

Based on the available news and the status of its website Qatar Solar Energy now appears to be defunct, however, abandoning its promised deals with Kazatomprom.[2] Even if it had gone through, this supply agreement may have done little to truly advance Kazakhstan's solar industry. Yet the publicity suggests an important confluence here: the language of promoting a "knowledge-based economy" is a staple of development agendas in both Kazakhstan and Qatar, and promoting renewable energy technology slots well into the technofetishism of both countries' sate-led development agendas (Koch 2014, 2018a). Regardless of the actual scope of the current collaboration, solar deals like these are a convenient platform for political and economic leaders in both countries to unite their narratives about sustainability, and align their economic interests with dominant national and international frames about promoting modern, "green" futures.

Kazakhstan's leadership has also sought stronger bilateral relations with the United Arab Emirates (UAE), though this has resulted in comparatively little of substance in the renewable energy sector. EXPO 2017 served as a convenient platform to narrate their potential partnerships around renewables. For example, the CEO of Abu Dhabi's iconic "carbon-neutral" Masdar city project (see Crot 2013), Mohamed Jameel Al Ramahi (2017), wrote an opinion article for the UAE's newspaper, *The National,* about the event, titled: "Two nations charting a course towards a prosperous future by tapping into human energy: Expo 2017 in Astana showcases the partnership between the UAE and Kazakhstan in knowledge building and real-world innovation." The commentary offered little in the way of details about what such a "partnership" represented in practice, but it highlighted the two countries' common goal of achieving a 50% clean energy goal by 2050, before then linking the UAE's sustainability agenda to its "founding father," Sheikh Zayed, who was described as inspiring "a generation of people who modernised the country through the responsible development of its conventional energy resources" (Al Ramahi 2017).

The shift Al Ramahi makes from sustainability to a prudent stewardship of "conventional energy resources" is common to much of the language from Emirati officials around renewable energy. In an interview with *The Astana Times*, for instance, the UAE's Ambassador to Kazakhstan, Dr. Mohammed Ahmed Sultan Al Jaber, does the same (Urankayeva 2017). He first praises EXPO for bringing "new focus to our international efforts and achievements in the renewable energy technologies," and highlights a memorandum of understanding (MOU), signed at the "Future Energy World Summit" in Abu Dhabi in January 2017, between the organizers of EXPO 2017 and EXPO 2020, to be held in Dubai. When the interviewer asked specifically about the "prospects for cooperation between the UAE and Kazakhstan in the field of renewable energy sources," Al Jaber offers a vague reply about the importance of "technology transfer and original expertise," and then noted another MOU between Kazatomprom and UAE Nuclear Energy Corporation around the "peaceful use of nuclear energy" and Kazakhstan's role in supplying natural and enriched uranium for the UAE's ambitious nuclear power agenda (quoted in Urankayeva 2017).

There are, of course, competing understandings about the role of nuclear power in debates about the global energy transition (Tarsova 2018), but the Ambassador's reply and the facts on the ground suggest that discussions about "renewable energy" are a convenient means of narrating a friendly and progressive relationship between Kazakhstan and the UAE, rather than challenging the status quo around conventional energy systems in the two states. When Sheikh Mohammad bin Zayed Al Nahyan, Abu Dhabi's Crown Prince and Deputy Supreme Commander of the UAE Armed Forces, visited Astana in July 2018, he also highlighted renewable energy as a source of collaboration, but ultimately left with vague promises for expanding bilateral ties and no concrete agreements (Gulf News 2018). This notwithstanding, as the cases of both the UAE and Qatar illustrate, renewables should be taken seriously as features in the reconfiguration of regional energy geopolitics, both in Central Asia and the Arabian Peninsula. The discursive repertoire of sustainability is significant insofar as it enables actors in both regions to narrate a particular vision of modernity and set the terms for future engagement, even if – or perhaps precisely *because* – it allows them to uphold existing political economies. Yet the growing

prominence of renewable energy in international networks of finance, prestige, and politics, means that mere rhetoric about renewables is unlikely to remain rhetoric alone.

Russia

In Russia, international involvement in the renewable energy sector has not been as prominent, while the country's nascent efforts to promote renewables has necessarily begun with building the necessary legal framework. These efforts have largely been tied to energy efficiency discourse and norms: the Federal Energy Efficiency Law of 2009 and Federal Heat Law of 2010 both rely on the idea that by promoting renewables energy efficiency is enhanced. This is probably the case, as renewable energy installations and infrastructure mostly replace outdated coal and heavy oil power plants. However, the idea is also linked to the long-lasting objective written in Russian energy strategies since the early 2000's that renewables substitute fossil energy, oil and coal, first and foremost, and thus releases these flows to export, and to more "efficient" use of these resources. Improvement of energy efficiency in energy extraction, transport and consumption was justified originally by economic, environmental, and foreign-policy (soft power) gains, especially during the Medvedev-era, 2008-2012, push for modernization. Naturally, it can be debated whether Medvedev's presidency had any real impact on economic, social and political practices of the Russian state, as Vladimir Putin remained *de facto* in power as the Prime Minister, yet stepped aside from the presidential position after two terms in 2000-2008. Still, on the discursive level Medvedev's term was very different. However, the conservative turn in Russian domestic and foreign policies experienced since the re-election of Putin in 2012 have basically dropped the environmental and even the soft-power justifications out of the equation, leaving money as the primary reason to enhance energy efficiency in Russia (Tynkkynen 2018).

Despite the efforts to construct the normative basis for renewables in Russia, there are still major problems related to the legal issues: the system is not transparent and full of loopholes impossible to tackle by small and medium sized business players. More to the point, the structure of the energy sector in Russia is highly biased, i.e. dominated by colossal parastatal companies and state corporations such as Gazprom, Rosneft and Rosatom. Thus, in this institutional setting it is extremely difficult to promote renewables. However, within the bioenergy sector, practically in the taiga (coniferous) zone of Russia, there is potential to deploy renewables as they enable to substitute the use of far-hauled and thus costly oil and coal. This is explained by the fact that forest industry is a powerful actor in the areas surrounding the three forestry clusters of Russia – Northwest, Southern Siberia and the Far East – and has an interest to expand to bioenergy, as well. Despite this positive potential push – according to the national energy strategies the North is a piloting area that would lead the way for wider bioenergy deployment in the whole country – power-plant projects using bioenergy have been scarce. In the forestry-based regions of Russia the Northern Delivery system (*severnyi zavos*), i.e. transportation of mainly heavy oil and coal from outside the region to be used in local power plants, is surprisingly one of the obstacles to develop bioenergy. Despite being costly to the communities of the North, the networks of power and the rents involved in the system make it difficult to build new energy capacities based on renewables (Salonen 2018). Bioenergy export, mainly to the EU, in the form of wood pellets and chips, on the other hand, has developed much more promisingly during the past decade, providing the Russian forest industry new markets and sources of income (Tynkkynen 2013).

In a context dominated by the state-controlled colossal fossil-energy industries it is therefore challenging to deploy renewables. In concrete infrastructural terms the obstacles are also related to the central role of gas, which comprises half of consumption in Russia's energy mix. Historically, the switch from coal and heavy oil in many Russian industrial centers has been a boon for human health and the environment, as emissions have decreased. Yet, this reliance on gas, created by both political and infrastructural path dependencies, has turned into a major barrier to de-carbonize Russia. More, the *Gazifikatsiia Rossii* program aiming to expand the gas-pipeline system to the national (e.g. the Far East) and regional (e.g. countryside towns and villages) peripheries of Russia, is diminishing the potential to deploy renewables (see Tynkkynen 2017).

It is thus no surprise that the actors that are able to build renewable energy capacities today are big domestic and foreign actors, not regional or local energy companies that could revolutionize the energy market from below. For example, Finnish company Fortum, producing up to 8% of Russia's electricity, after it purchased half of stocks of a German-owned Uniper active in the Russian energy market, is investing in both wind and solar power in Russia (Fortum 2018). Russian state corporation Rosatom, responsible for nuclear power as well as weapons, has also entered the renewables scene with large-scale investments in wind-power. Compared to the deployment of new nuclear-power capacity by Rosatom, however, the renewables projects pushed by the corporation are extremely small-scale. They can be seen as an image-construction effort, a showcase initiative enabling the nuclear giant to green-wash its highly problematic environmental track record and otherwise non-transparent activities.

These cases show that so far only big actors are able to push forward renewables projects on a scale that has any significance. Together the online capacity (ca 200 MW) and ongoing wind-power investments (ca 1800 MW) in Russia constitute about 2000 MW, which is a very low figure for the world's biggest country with an enormous wind-power potential. According to World Energy Council (2018) the economically viable wind-power potential of Russia is staggering 6000 TWh per year. In comparison, Germany, having the third largest wind-power capacity after China and the US, produced 80 TWh from wind in 2016. A telling fact is that China has more than 150-fold and the US about 80-fold wind-power capacity online at the moment. However, a governmental degree from 2016 aims to build more than a dozen wind farms bigger than 100 MW with an objective to gain a total wind-power capacity of 4.5 GW by 2030. For the plan to be successful, Russia will need transparent rules of the game for all actors, small and large – lest it too fall victim to the boom-bust cycle of policy pivots endemic to Russia's economy.

The geopolitics of renewables

Russia and Kazakhstan are becoming home to more renewable energy schemes, though the pace of change and the scale of these projects vis-à-vis hydrocarbon sources is impossible to predict. Nonetheless, policymakers and scholars alike need to continue investigating the material effects and power networks that are materialized – and contested – in the recent push to engage with the globally-hegemonic (if nebulous) concept of sustainability. But this needs to be done with a keen eye to the role of political geography. Iconic as the Kazakhstani and Russian projects may be, their differences and similarities show that they are not simply "false" or "irrelevant." Rather, they point to new directions about how individuals in both states are making strategic decisions based on a global economy of prestige related to energy systems today.

Rooted as the current push to sustainability and green economic development is in an economy of prestige, it also entails substantial financial rewards of "winning" – however that may be defined by actors in all sectors, and both locally and globally. Sustainability projects aim to make certain leaders and citizens proud of their country's modern image. Meanwhile, regional governors and mayors are securing their position in the system, just as are international agencies like the European Bank for Reconstruction and Development. Foreign companies are making profits and gaining a local foothold in challenging settings. Large sums of money change hands in all these cases, albeit more transparently in some cases than others. By homing in on these diverse actors, including domestic political and economic elites, foreign corporate actors, and international organizations, this article points to the contingent and diverse avenues through which renewable energy might represent "a game changer for interstate energy relations" (Scholten 2018b, 1).

Positioned within the broader intellectual tradition of critical geopolitics, this study also highlights the need to analyze the geopolitics of renewables beyond simplistic framings of "states" as actors in the field of energy geopolitics by emphasizing the fuzzy (or sometimes downright fictitious) divide between corporate and state actors (Kuus and Agnew 2008; Huber 2011, 2012, 2013; Mitchell 1999, 2011). To push beyond this territorially-trapped vision of the state, we consider various actors working for and against the "state," selectively mobilizing its discursive power or that of the "market" (though often doing both simultaneously). In doing so, we aim to develop a better understanding of who

is poised to win and lose in the "game" of a rapidly-changing energy landscape in Eurasia, and how renewable energy markets, discourses, and infrastructures are themselves an increasingly important conduit for the (re)working of political and economic relations within states, regions, and across the globe.

This article also pushes beyond the quiet assumptions of much writing on environmental sustainability, which tends to imply a liberal democratic context or set of norms. As we demonstrate in both Russia and Kazakhstan, sustainability discourse does not derive its legitimacy from or resonate with a strong popular consensus about the need to protect the natural environment. Rather, like comparable green development agendas in other authoritarian sates, Russian and Kazakhstani actors promoting sustainability have actively mobilized their discursive hegemony to narrow the contours of the conversation to focus on a limited – and politically palatable – set of issues. In Russia, for example, this choice is evident in the way environmental awareness and citizenship is promoted within the "Year of the Environment 2017": the Russian Geographical Society, previously an independent academic society turned into a shell-NGO of the Putin regime, is portrayed as the envoy of popular worries and sentiments concerning the environment.

As political and corporate leaders across the world increasingly adopt the concept of sustainability, highlighting the positive, modern, and allegedly progressive image of advancing "green" agendas, this tends to push aside far more sensitive questions. In Russia and Kazakhstan, as in much of the rest of the world, these encompass extraordinarily inefficient energy systems hamstrung by "business as usual" approaches, failing or completely lacking infrastructures, regional development inequalities, widespread poverty among citizens, and painful foreign policy challenges that might appear to undermine state sovereignty – all of which demand huge political and financial capital to address properly, but none of which appear as reasonable targets for shortsighted political and financial elites who, as anywhere, often prefer quick returns on their investments. So while some changes are clearly underway, the cases of Russia and Kazakhstan suggest that, for now, the geopolitics of renewables is still a geopolitics of oil and gas.

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[1] We do not consider grassroots environmental activist because, though present in both countries (Agyeman and Ogneva-Himmelberger 2009; Henry 2010), they are not robust and do not play a significant role in advancing the renewable energy agenda.

[2] See https://www.qatarsolar-energy.com/. Off the record, colleagues in the Gulf energy consulting and legal spheres suggest that the company was likely backed by a wealthy businessman and/or royal family member, who simply "lost interest." We could not verify this, but they suggest that this is commonplace with the deals they negotiate and the firms they help to set up in the region.