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Kazakhstan foreign policy in the context of renewable energy

Energy transition represents a disruptive innovation to the conventional energy industry. The Republic of Kazakhstan's ambitious decarbonisation goal of achieving 30 % share of renewable energy in the domestic power generation matrix by 2030, and 50 % by 2050, potentially creates new possibilities across many sectors. This paper aims to examine the prospects of petroleum politics and green diplomacy within the scope of Kazakhstan's multi-vector foreign policy. The research question is: do Kazakhstan's foreign relations benefit from a rising share of renewable energy in its electric power generation? Green theory is employed as the theoretical framework, providing an alternative to the major traditional legal conceptions of security, state and economy. The findings indicate a fully sustainable foreign policy is highly unlikely without an ecocentric value shift that recognizes the intrinsic value of nature.

Keywords: Kazakhstan, renewable energy, green theory, petroleum politics, green diplomacy, multi-vector foreign policy.

Introduction

Energy transition is a pathway toward transformation of the global energy sector, e.g. from wood to coal, from oil to gas and nuclear. Now, the world is engaged in a massive shift towards renewable energy in order to reduce energy-related CO₂ emissions. According to the report «Electrification With Renewables: Driving the transformation of energy services» produced by the International Renewable Energy Agency (IRENA) in 2019, the renewable share in power generation would climb from 26 % in 2018 to 85 % in 2050, with up to 60 % coming from variable sources such as solar and wind [1]. The plunging demand for oil wrought by the coronavirus pandemic combined with a savage price war in 2020 has further made the fossil fuel industry a very unattractive proposition to investors. Substantial changes are to be expected in the very shape of the energy industry itself. Kazakhstan, emerged as the largest economy in Central Asia, is not immune from the impact of this global trend of energy transition. Due to its resources and enormous size, Kazakhstan finds itself crammed between the interests of rising powers, regional powers and the superpowers.

The notion of Kazakhstan as a bridge transcending geographic regions and civilizations is presented as a justification for the republic's multiple international engagements. Its multi-vector foreign policy, as reflected in its commitment in multilateral organizations as well as its bilateral relationships, has benefitted the republic without creating adversaries in international politics. Its vast coal, oil, natural gas and uranium reserves have enabled it to gain leverage in managing difficult relations with neighbouring Russia and China, and form strategic partnership with the US and the EU. Home to the world's 12th-largest oil reserves and a member of OPEC+, Kazakhstan might seem to have low incentives to invest in diversifying away from fossil fuels. However, the predominance of extractive industries and the associated high levels of energy intensity risk significant damage to land, water, and to air quality in the republic. Kazakhstan's reputation as the world's 26th-largest contributor to greenhouse gas (GHG) emissions — reporting 0.63 % to global emissions in 2016 [2], highlights the republic's dependent on unsustainable resource use patterns and the problems created by its ageing inefficient Soviet-era energy infrastructure, with coal alone responsible for covering more than 70 % of the nation's electricity demand. When First President Nursultan Nazarbayev announced in 2012 that the republic would implement green economic policies through its «Strategy 2050» development plan, Kazakhstan aspired to become one of the top 30 competitive developed countries in the world by 2050 while gradually «greening» key economic sectors. Renewable energy policy has since been developed in a decidedly top-down fashion as best illustrated in signing the Paris Climate Change Agreement in 2016 and the «Future Energy» theme of the EXPO 2017 Astana. The republic's National Concept for Transition to a Green Economy also sets a bold timeline to move from under 1 % renewable energy sourcing when it was

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adopted in 2013 to 3 % by 2020, 30 % by 2030, and 50 % by 2050, promoting a more decentralised, balanced and environmentally friendly energy supply system [3]. With an active adoption of a new legal framework and an auction system for renewable energy projects to attract foreign investment for the energy transition, in 2019 electricity generation at new solar, wind and small hydropower plants has reached a total 1042 megawatts (MW) — about 2.3 % of the total installed capacity of all power plants operating in the country [4]. This recognises not only the republic's abundant fossil fuel sources but the highly favourable geography for renewable energy development. Besides, the Astana International Financial Centre (AIFC), International Centre for Green Technologies and Investments and Astana Hub International IT and Start-ups Hub are some of the most important recent developments in the capital city Nur-Sultan. Fully-fledged in 2018 and located at the EXPO business centre, they were created to be promoting Kazakhstan's accelerated transition to a green economy by fostering technology and best practices, business development and investments.

This paper aims to explore the implications of renewable energy development on Kazakhstan's foreign relations. Given that the ecocentric features of renewable energy increasingly resonate across the globe to combat carbon pollution, Kazakhstan's energy future is more than a contention between the fossil fuel industry and renewables advocates but entails a broader ecological perspective on common human interests over the political boundaries of economic advantage.

Discussion

This section presents a literature review to address the research question. Besides clarifying the key concepts of petroleum politics and green diplomacy, Kazakhstan's multi-vector foreign policy is also reviewed. A hypothesis is then formulated in accordance with relevant academic publications.

Petroleum politics. The significance of oil as a world energy source is difficult to overdramatize. The growth in energy production during the 20th century was unprecedented, and increasing oil production has been by far the major contributor to that growth. There is no surprise how much international concern and conflict arise regarding petroleum and the companies that supply it around the globe. According to Arthur H. Westing (1986), the geographical distribution, availability, and degradation of the world's key resources — oil and natural gas included — influence the international security perceptions that govern strategic policies and the use of military force [5]. Michael T. Klare (2001) comments that the ideological divisions of the Cold War have given way to an immense global scramble for essential materials, such as oil, and thus in the early decades of the new millennium wars are to be fought over resources, leading to widespread instability especially in those places where resource competition overlaps with long-standing disputes over territorial rights [6]. Jeff D. Colgan (2014) argues that oil politics is a major force in global and domestic politics, especially in developing countries. States that are petro-revolutionary — having both oil income and a revolutionary leader — tend to instigate conflicts at a rate three and a half times that of a comparable «typical» state (one without oil or a revolutionary leader) [7]. Fidelis Allen (2018), taking reference from the Nigerian case, asserts that the oil industry is not neutral of interests but alliance structures exists at the national fronts with multinational oil companies (MNCs) forging relationships with national and local political, military, and economic elites on the basis of common interests [8]. Tito Cordella and Harun Onder (2020) investigate how the devolution of oil windfalls affects the likelihood of political violence, in which their findings show that transferring large shares of oil wealth can prevent conflict, while transferring small shares can trigger it [9]. Hao Chen et al (2016) address the impacts of OPEC's political risk on the fluctuations of international crude oil prices, illustrating a significant and positive influence of the former on the latter [10]. Gawdat Bahgat (2007) argues that oil and natural gas from the Caspian Sea is certain to contribute to global energy security but not a replacement of the Persian Gulf [11]. Adnan Vatansever (2017) examines Russia's surplus pipeline capacity for oil and gas export, giving explanations on Russia's institutional setting, energy «pivot to Asia» and attempt to minimise transit risks [12]. Michael Bradshaw et al (2019) claim that, based on the Intergovernmental Panel on Climate Change (IPCC)'s 1.5 °C report, climate change mitigation must see an early peak in oil demand and a rapid fall in consumption thereafter, suggesting that fossil fuel exporters must act now to prepare for the low carbon transition to prevent oil-related tensions and conflicts that could undermine the collective action required to address climate change [13]. Aktoty Aitzhanova et al (2014) also hint an urgent transition to a non-oil economy for Kazakhstan to avoid undesirable impacts when its oil production capacity is envisaged to collapse to negligible amounts after the peak period of 2035 [14].

Green diplomacy. Protection of the environment nowadays is among the top priority on the agenda of the international community of decision-makers. There is no major international meeting, especially at the

top (such as the Group of Seven, World Trade Organisation and others), which does not take into question, if not the actual ecological issues, at least the environmental implications of the issues discussed. All spheres of diplomacy — including human rights and humanitarian affairs, peace and security, trade and investment, global economic recovery, and development cooperation — have to adapt to the new generation of global environmental sustainability challenges. According to Stefu Ioan (2013), green diplomacy represents a new kind of diplomacy — more ‘technical’, more flexible and more direct — that aims at raising awareness and promoting common interests in the management and protection of the shared natural heritage of humanity at bilateral, regional or global scale. Ioan also argues that the technical character of green diplomacy requires its practitioners to possess minimum ecological, biological, economic, legal, etc. knowledge in addition to the basic training of every diplomat — which has led some states to establish one or more ambassadors specialized in environmental issues [15]. Martina Klimes et al (2019) echo by acknowledging the important role of technical knowledge in the political tracks of water diplomacy to ensure sustainability of water cooperation processes [16]. Rebecca L. Farnum (2018) applies the notion of water diplomacy to demonstrate how fog water is being used to lay the environmental groundwork for transboundary water-based peacebuilding exemplified by the Ait Baamrane region in Southwest Morocco [17]. Mabroor Hassan et al (2017) emphasize on the need for environmental diplomacy in Pakistan within the South Asian context and comment that integration of development with environmental factors and peacemaking has potential to achieve sustainable development in South Asia, highlighting the potential of environmental challenges in causing inter-state conflict in the region [18]. Jing Gu et al (2018) analyse the BRICS’ (an informal group of states comprising Brazil, Russia, India, China and South Africa) approach to sustainable development, renewable energy and green economic growth in Africa, arguing that individual member states — China and India in particular — are the main drivers for renewable energy investment and technological cooperation [19]. Claudio Feijóo et al (2020) look into «new technology diplomacy,» suggesting that artificial intelligent (AI) is poised to transform human relationship with the environment and promote a renewed kind of international engagement aimed at transcending narrow national interests and seeks to shape a global set of principles [20]. McKenzie F. Johnson (2019) questions the growing enthusiasm for green governance as a mechanism to mitigate conflict and improve social and environmental justice, arguing that insecurity is produced and reproduced by the reorientation of social relations around global standards of natural resource conduct that limit options for domestic political engagement and exacerbate institutional pluralism and conflict [21]. Guo Li et al. (2020) examine the impact of green diplomacy on a country's carbon emission level, concluding that the signing of environmental treaties yields only short-term CO₂ emissions reduction for developing countries but produce no long-term result [22].

Kazakhstan's multi-vector foreign policy. Of all the Central Asian states, Kazakhstan has been most successful in balancing its foreign relations with a variety of global powers. The country has even branded its foreign policy as «multi-vector» to accentuate its success in maintaining a diverse set of international partners. Randall Schweller (1994), based on the neorealist perspective, comments that a secondary state, faced with such great power interlocutors, would adopt strategies of balancing motivated by «self-preservation and the protection of values already possessed» and bandwagoning as «self-extension to obtain values coveted» [23]. According to Michael Clarke (2015), Kazakhstan's multi-vector foreign policy is built on First President Nazarbayev's understanding that the republic seeks «mutually advantageous» and «good neighbourly relations of confidence on the whole of the Eurasian continent,» which is concerned with ensuring Kazakhstan's independence and sovereignty by offsetting traditional Russian hegemony through the diversification of political and economic ties with other major power centres — China, the US and the EU [24]. Ruth Deyermond (2009) argues that Kazakhstan's foreign policy is characterized by «multi-levelled regional hegemonic competition» between, on one level, Russia, the United States and China, and, on a lower level, between «sub-regional hegemonic aspirants» Kazakhstan and Uzbekistan [25]. Edward Schatz (2006) speculates that the elite in Kazakhstan has used foreign policy to legitimate its rule by turning abroad to construct an image that it is «engaged internationally and therefore deserving of support domestically,» with foreign policy actions that are «high profile, relatively low cost, and rife with symbolic importance» [26]. Sally N. Cummings (2003) analyses Nur-Sultan's multi-vector foreign policy, particularly in the 1990s, in associated with the integration of a «pacified, economically liberal and internationalist» Kazakhstani identity with «regional and multilateral institutions and identities», highlighting the features that assuage the country's ethnic Russians, maintain an inevitable relationship with Moscow and anchor sovereignty vis-à-vis Russia and China [27]. Karl Erik Bragtvedt Henriksen (2013) examines the relationship between Kazakhstan's oil and gas resources and its multi-vector foreign policy, demonstrating that Kazakhstan has developed its oil

and gas resources and export routes in accordance with its multi-vector foreign policy by triangulating Russia, China and the US for its benefit [28]. Pinar Ipek (2007) argues that Kazakhstan's lack of direct outlet to the open seas and communicative resources has made cooperative relations with contiguous states essential for its economy — in which oil accounts for 70 percent of total exports and delivers up to 40 percent of government revenue — to ensure multiple access to markets [29]. Annette Bohr (2010) considers that the US-Kazakhstan Strategic Partnership Dialogue has been built on two complementary interests, which are energy issues and Afghanistan, since 2001 [30]. Justyna Misiągiewicz (2019) comments that the growing energy needs have given China a strong interest in developing ties with energy-producing states in the Central Asia region to build necessary pipeline infrastructure, with Kazakhstan getting increasing importance in this context [31]. Enersto Gallo (2014) observes that Russia's agenda in Central Asia, which has focused on retaining its dominant position in the energy sector and in maintaining its foothold in the strategic/military sphere, has been challenged or eroded by China's focus on greater economic interconnectivity via its Belt and Road Initiative (BRI) [32].

Hypotheses. This paper aims to explore the implications of renewable energy on Kazakhstan's foreign relations. The literature review results in this hypothesis: renewable energy development helps advance Kazakhstan's foreign policy choices.

Methodology and theoretical framework

Climate change, pollution, and the loss of biodiversity are environmental issues that spill over borders. When analysing the questions posed in this paper, the radical features of green theory provide a theoretical framework that incorporates international relations with non-human nature, needs of future generations and ecological risk distribution. Green theory analysts look at real world environmental problems differently as compared to realism or neoliberalism. While realists assume environmental problems are irrelevant to national security, neoliberalists do acknowledge environmental challenges and want to tweak the incentive structures in order to bring about cooperation amongst states [33].

Green theory of international relations is clearly different than traditional international relations theories in many ways. One of the best known slogans inspired out of green international relations theory on world politics is «think globally, act locally,» exemplifying its three specific characteristics, namely ecocentrism, limits to growth and decentralization of power. Ecocentrism is interpreted as the rejection of an anthropocentric world-view by stating that all beings are fundamentally «embedded in ecological relationships» with no rigid distinction between humans and the rest of nature [34]. Limits to growth refers to the shifting of focus from economic growth towards sufficiency and income security for the creation of a sustainable society [35]. Decentralisation of power indicates the need to shift authority from international institutions to local political economies and self-reliant communities — which are supposed to be more sensitive to the environmental problems around them — to ensure quick response and feedback before they turn severe when handling global environmental issues [36]. Wherefore, «think globally, act locally» means «think about the effects of what you are doing on the global environment». Security, in this context, is understood by taking human well-being and ecosystem integrity as the ethical and analytical reference point. While international agreements are formally implemented by governments and other constitutional bodies, the key agents of change are a much wider range of non-state actors, smaller groups and individuals. Each locality, for example, can help mitigate global depletion of resources by recycling plastic bags and bottles, reduce marine pollution by demanding tertiary treatment of municipal wastes, and save energy by replacing incandescent light bulbs with compact fluorescent or LED ones.

It is noteworthy that a concept of ecological modernization has been promoted — in which technological advancement, innovation and economic growth are to take place with less energy and resources, keeping the waste produced/per unit of GDP to the minimum [37]. Likewise, the United Nations Environment Programme defines a green economy as «one that results in improved human well-being and social equity, while significantly reducing environmental risks and ecological scarcities. It is low carbon, resource efficient, and socially inclusive» [38]. Apparently, both of these contemporary concepts are comparable to the ecological way of life of the Kazakh nomads, in which they tried to leave nature as untouched as before their arrival to preserve the immutability and loyalty to Mother Nature [39]. However, in a world of states with primary responsibilities to their own citizens, finding acceptable trade-offs between immediate economic wellbeing and longer-term ecological wellbeing is difficult. There is some prospect of powerful states — like China — or groups of states — like the EU and the Organization for Economic Cooperation and Development (OECD) — leading the way and altering the structural parameters to ensure modernisation of their econo-

mies with least resources exploited. For Kazakhstan, although its hydrocarbon-intensive economy draws a sharp contrast with the characteristics of green theory, the republic's goal of becoming one of the OECD-countries by 2050 [40] — as proposed in «Strategy 2050» by First President Nazarbayev — has made green theory relevant to its pursuit of a sustainable future with «green growth.» According to OECD, green growth is about fostering economic growth and development while ensuring that natural assets continue to provide the resources and environmental services on which humanity's well-being relies. It is also about fostering investment and innovation which will underpin sustained growth and give rise to new economic opportunities policy action [41]. The seven indicators of green growth are as follows: Environmentally adjusted multi-factor productivity, Low land consumption, Low air pollution exposure, Environmentally related innovation, Environmentally related taxation, GDP per capita, Low income inequality, CO₂ productivity (production-based), CO₂ productivity (demand-based), and Material productivity [42].

Following the COVID-19 coronavirus epidemic and global financial downturn in 2020, the adoption of green theory has increasingly become a prominent part of the discourse of international politics for improved transparency, sustainability, resiliency and accountability. Green theory's notions of security, state and economy can be used to explore the implications of renewable energy development on Kazakhstan's foreign relations in an era of global environmental sustainability.

The main part

Overview of energy reforms and ecology in Kazakhstan. This section gives a brief overview of Kazakhstan's renewable energy strategy in association with its strict control over socio-economic development to prevent ecological degradation in the republic. In fact, Kazakhstan is a victim of at least two major ecological disasters within its borders: the shrinking of the Aral Sea caused by mismanagement of irrigation projects, and radioactive contamination at the Semipalatinsk nuclear testing facility. Although these issues are due in large part to Kazakhstan's years under the Soviet Union, the republic's extractive sector — coal, oil, gas and metal ore — has continued to deteriorate its water, air and soil quality since independence. It has been stated in Global Resources Outlook 2019, a report produced by the International Resource Panel of the United Nation Environment Programme, that extractive industries are responsible for half of the world's carbon emissions and more than 90 % of biodiversity loss and water stress [43].

Given the disproportionately influential role of oil sector performance in supporting growth in the nonoil economy, for over a decade Kazakhstan has had determined to undergo structural and institutional reforms to facilitate the development of a vibrant, modern and innovative tradable non-oil sector for the republic's future. In fact, it is one of the first Central Asian states to have built an institutional framework for transition to a green economy, having adopted an Ecological Code in 2007 and Law on Supporting the Use of Renewable Energy in 2009. In 2012, Kazakhstan, after becoming a state party of the Kyoto Protocol from the second commitment period, began efforts to build a domestic emissions trading system (ETS). The Kazakhstan Emissions Trading System (K-ETS), launched in January 2013, was initially established as a tool to aid the country in switching to clean, more efficient technologies for industry, manufacturing, and electricity generation [44]. In 2013, Kazakhstan also adopted the National Concept for Transition to a Green Economy, outlining a future development path guided by green energy policies. The ambitious plan aimed to increase the share of renewable energy in electric power generation to 30 % by 2030 and 50 % by 2050, enhancing the republic's efforts in energy security, economic development and environmental protection. Besides, the government established the Financial Settlement Centre for Support of Renewable Energy Resources (FSC), a limited liability company registered under the Kazakhstan Electricity Grid Operating Company (KEGOC, a joint stock company), to buy all power from renewable energy operators under 15-year power purchase arrangements and then blend the renewable energy electricity to sell to conventional generators. Development of hydropower (especially small hydropower stations), solar and wind is an important component of this transition, and the republic plans to gradually decommission the aging infrastructure, install energy-efficient equipment and comply with strict environmental standards. On August 2, 2016, Kazakhstan signed the Paris Climate Change Agreement — an important symbol of the world community's determination to put an end to environmental degradation and global greenhouse gas emissions.

Kazakhstan's topography is indeed suitable for the development of renewable energy. More than 50 % of the republic, particularly in the northern regions, has average wind speeds of between 4 and 6 metres per second, making them suitable for utility-scale wind farm development, whereas southern Kazakhstan receives consistently high levels of solar irradiation [45]. The latter is particularly meaningful for Almaty as the city with a population of 1.8 million is located in the republic's south and far from the majority of Ka-

zakhstan's existing power generation facilities in the north. Developing new capacity from renewable energy in both the north and south could limit the need to transmit electricity over large distances and reduce efficiency losses. Although renewable energy was not directly mentioned in the Kazakhstan 2050 Strategy, «search and discovery of energy of the future» was featured separately from nuclear power development as one of the top ten national projects [46]. With an auction scheme introduced in 2017, a gateway has been opened for developers and financiers — whom can be both legal entities created in Kazakhstan and foreign legal entities — to bring in investment, technical experiences and latest renewable energy technologies. The initial pilot auction, completed in early June 2018, resulted in 194 MW of renewable energy capacity being awarded. In October 2018, the second round of auctions resulted in the award of 664 MW renewable energy capacity [47]. In 2019, the total renewable energy capacity has increased to 1042 MW, making up 2.3 % of the total installed capacity of all power plants operating in Kazakhstan [48]. Auction participants in 2018–2019 included a total of 145 companies from 12 countries: Kazakhstan, Russia, China, Turkey, the Netherlands, France, UAE, Bulgaria, Italy, Germany, Malaysia and Spain [49].

Although energy transition is slowly maturing in Kazakhstan's laws and commerce, much remains to be done to strengthen the regulatory framework addressing control of emissions, use of renewable resources and increasing energy efficiency measures, while also working to improve public utilities and infrastructure challenge. The launch of AIFC's Green Finance Centre (AIFC-GFC) on June 1, 2018 can be considered groundbreaking in this regard with the intention to develop and promote green finance in Kazakhstan and neighbouring countries — namely the Commonwealth of Independent States (CIS), the Eurasian Economic Union (EAEU), the Middle East, West China, Mongolia and Eastern Europe. Green bonds, climate bonds and other forward-looking instruments are expected to stimulate development in the following spheres: «renewable energy», «energy efficiency», «pollution prevention and control», «sustainable management of living natural resources», «terrestrial and aquatic biodiversity preservation», «clean transportation», «sustainable water management», «climate change adaptation», «eco-efficient products, production technologies and processes», and «clean buildings» [50]. Although the ultimate goal of this transition to a green economy is to enable Kazakhstan to achieve the proclaimed goal in «Strategy 2050» of entering the top 30 developed countries of the world by 2050, AIFC-GFC can be an impetus to intra- and extra-regional cooperation as its regulatory framework welcomes partnership deals and investment options towards the choice of low-carbon and eco-centric solutions in accordance with the global trend of green growth. Given the 2020 crossfire between low oil prices and the COVID-19 pandemic, oil production in Kazakhstan is expected to shrink by 15 % due to low international and domestic demand for industrial fuel, gasoline, and aviation fuel [51]. In this connection, promotion of private sector investment in utility-scale renewable energy in Kazakhstan can be an alternative for building national production capacity and improving economic growth prospects. In fact, stimulus and recovery packages should be designed to accelerate the shift to sustainable, decarbonised economies and resilient inclusive societies. A growing number of experts have already proposed that a push for green growth can help the global economy recover from the coronavirus pandemic, claiming that «with the right green stimulus policies in place that ramp up investment in long-term, sustainable solutions from electric transport to clean, efficient energy, we can deliver on the goals of the Paris Agreement without compromising on economic growth» [52].

Results and discussions. This section presents the results and discussions of the empirical analysis of the hypothesis, namely whether renewable energy development helps advance Kazakhstan's foreign policy choices. As a result of the sudden stop in the economy due to COVID-19 in 2020, renewable energy has been proven to be the energy source most resilient to global lockdown measures [53]. For Kazakhstan, what are the prospects of petroleum politics and green diplomacy within the scope of its multi-vector foreign policy? Green theory — via its emphases on ecocentrism, limits to growth and decentralisation of powers — sets new benchmarks for the republic to position itself in the world through the lens of global environmental sustainability.

As the most essential and biggest emerging economy in Central Asia, the promotion of renewable energy as an industry should indeed be manoeuvred as one of the important economic engines for Kazakhstan in the long term. Petrochemicals, in particular, offer the republic an enormous potential to explore new chances for economic growth from renewable energy applications, including more job opportunities, new industries and new supply chains. Petrochemical products are everywhere and are integral to modern societies. They include plastics, fertilisers, packaging, clothing, digital devices, medical equipment, detergents, tires and many others. They are also found in many parts of the modern energy system, including solar panels, wind turbine blades, batteries, thermal insulation for buildings, and electric vehicle parts. Although demand for

gasoline and other hydrocarbon fuels is expected to be on the decline by 2030 [54], exploring and drilling for oil are likely to remain intensive with petrochemicals set to account for more than a third of the growth in world oil demand to 2030, and nearly half the growth to 2050 [55]. Kazakhstan is well-positioned to develop its domestic petrochemical industry by playing a role in renewable energy technologies manufacturing. The joint development agreement signed in 2018 by Austria's Borealis and Kazakhstan's United Chemical Co. signifies the latter's ambition for a strong presence within the global polyolefin market by exploring an alternative use of the oil and gas from the Tengiz Field in Atyrau [56]. With adequate investment in technologies for deep processing of oil and gas, green growth will become achievable for Kazakhstan through its participation in the global industrial, supply and value chains of renewable energy technologies.

It is important to note that, despite complex investment challenges due to the harsh operational environment of exploration and production activities, the hydrocarbon industry is not necessarily in contradiction with a green economy if conducted in a way that is both ethical and sustainable. As a strategic response to the growth potential in the renewable energy sector and the rising cost of hydrocarbon extraction — in addition to pressure from shareholders and climate activists to reduce their carbon emissions from their hydrocarbon businesses [57], oil companies worldwide are getting increasingly active in the electricity and renewable energy sector, albeit at quite different levels of engagement. Oil majors — Royal Dutch Shell, ExxonMobil, Chevron, Total, BP, Eni, Petrobras, and Statoil/Equinor — are leading the way in shaping new strategies to capture a portion in the fast-growing renewable market. Besides, some oil and gas companies have come up with constructive community development schemes. Their «corporate social responsibility» (CSR) strategy has led them to establish schools and hospitals, design micro-credit schemes for the local community and support employment programs for the youth, particularly in the developing nations, as means to operate with fairness and honesty with customers and suppliers, give back to and actively participate in local communities, and value employees, while earning profits for shareholders [58]. There is also environmental CSR that aims to reduce any damaging effects on the environment from business' processes, in which energy use, water use, waste management, recycling, emissions, eco-friendly office and business travel policies are the focuses [59]. The OECD Guidelines for Multinational Enterprises are the most comprehensive set of government-backed recommendations on responsible business conduct in existence today.

On this basis, for Kazakhstan, its petroleum-based economy does not necessarily become obsolete. If CSR is observed across the republic's extractive sector in accordance with the OECD Guidelines, the hydrocarbon industry can contribute positively in the transition to a green economy and green growth. As stated by First President Nazarbayev in «Strategy 2050» regarding energy resources, «Kazakhstan's oil and gas complex remains the powerhouse of our economy, which facilitates growth of other sectors. We have successfully created a modern and efficient oil, gas and mining sector. Our success in this area will help us to build a new economy of the future»; and «having world-class oil and gas reserves, our country will not depart from its policy of reliable strategic partnerships and mutually beneficial international cooperation in the energy sector» [46]. While policy makers underscored hosting EXPO-2017 as a necessity for improving international perceptions of Kazakhstan's greenness as a petrostate, the republic's aspiration in becoming a regional hub for green finance is enhanced by the establishment of the Green Financial System — which is now in place as a key component of AIFC — to provide further support for the investments in Kazakhstan's green economy and a networking platform with investors from Western Europe, North America and Southeast Asia, where the green agenda is well developed [60]. Given Kazakhstan's growing role as a logistics pivot connecting Europe and Asia, the republic should take advantage of its geographical location and improving infrastructure to cooperate with multiple countries to solve common development issues — including carbon mitigation, renewable energy development and ecological restoration — based on international best practices. This can lead to sustainable foreign policy-making with an increasing share of green dimensions of Kazakhstan's diplomacy, in addition to petroleum politics.

Kazakhstan, in this context, is viable to use renewable energy development to advance its foreign policy choices. While its multi-vector foreign policy remains crucial in balancing the geopolitical interests of different world powers, a slight shift from petroleum politics to a higher share of green diplomacy can evolve its role as both an energy producer and a green advocate, creating new capacity and new spectrum in its foreign policy-making. The findings indicate a fully sustainable foreign policy is highly unlikely without an ecocentric value shift that recognizes the intrinsic value of nature at this time of energy transition.

Conclusion

This research paper demonstrates that Kazakhstan's target of raising the share of renewable energy sources to 50 % by 2050 is more than an internal affair but has significant implications to its multi-vector foreign policy. The era of carbon-intensive energy derived from the burning of fossil fuels is coming to a decline, and a cleaner, more reliable energy future based on renewable energy sources and technologies will be the new normal for Kazakhstan in the coming decades. Global environmental sustainability has given new interpretations to the major traditional legal conceptions of security, state and economy. Innovative approaches are already proposed and showcased in the format of green finance, green growth and CSR practices to conserve resources and make renewable energy systems cheaper and more efficient to manufacture, install and operate. With these global trends, a fully sustainable foreign policy is highly unlikely without an ecocentric value shift that recognizes the intrinsic value of nature. Kazakhstan's foreign relations thus benefit from a rising share of renewable energy in its energy matrix. It is noteworthy that, instead of being either an energy producer or a green advocate, the republic should take advantage of being both for maximum manoeuvre between petroleum politics and green diplomacy within the scope of its multi-vector foreign policy.

References

- 1 IRENA. Electrification with Renewables: Driving the transformation of energy services. — 2019. — URL: https://irena.org/-/media/Files/IRENA/Agency/Publication/2019/Jan/IRENA_RE-Electrification_SGCC_2019_preview.pdf.
- 2 Ge M. 4 Charts Explain Greenhouse Gas Emissions by Countries and Sectors. / M. Ge, J. Friedrich // World Resources Institute. — 2020. — URL: <https://www.wri.org/blog/2020/02/greenhouse-gas-emissions-by-country-sector>.
- 3 Koch N. Renewables in Kazakhstan and Russia: Promoting 'Future Energy' or Entrenching Hydrocarbon Dependency? / Koch N., Tynkkynen V. // Ponars Eurasia. — 2018 — URL: <https://www.ponarseurasia.org/memo/renewables-kazakhstan-russia-future-energy-or-entrenching-hydrocarbon>.
- 4 Press service of the Prime Minister of the Republic of Kazakhstan. In 2019, capacity of renewable energy sources in Kazakhstan doubled. — 2019. — URL: <https://primeminister.kz/en/news/za-2019-god-v-moshchnosti-vie-kazahstana-uvelichilis-vdvoe>.
- 5 Westing A. Global Resources and International Conflict: Environmental Factors in Strategic Policy and Action / A. Westing. — Oxford: Oxford University Press, 1986.
- 6 Klare M. Resource Wars: The New Landscape of Global Conflict / M. Klare. — New York: Henry Holt and Company, 2001.
- 7 Colgan J. Oil, Domestic Politics, and International Conflict / J. Colgan // Energy Research & Social Science. — 2014. — Vol. 1. — March, 2014. — URL: <https://www.sciencedirect.com/science/article/abs/pii/S221462961400019X#!>.
- 8 Allen F. Chapter 19 — Politics of State/Oil Multinational Alliance and Security Response / F. Allen // The Political Ecology of Oil and Gas Activities in the Nigerian Aquatic Ecosystem / ed. P.E. Ndimele. — Academic Press & Elsevier Inc., 2018. — URL: <https://www.sciencedirect.com/science/article/pii/B9780128093993000197>.
- 9 Cordella T. Sharing oil rents and political violence / T. Cordella, H. Onder // European Journal of Political Economy. — 2020. — Vol. 63. — URL: <https://www.sciencedirect.com/science/article/abs/pii/S0176268020300306>.
- 10 Chen H. Impacts of OPEC's political risk on the international crude oil prices: An empirical analysis based on the SVAR models / H. Chen et al. // Energy Economics. — 2016. — Vol. 57. — URL: <https://www.sciencedirect.com/science/article/pii/S0140988316300974>.
- 11 Bahgat G. Prospects for energy cooperation in the Caspian Sea / G. Bahgat // Communist and Post-Communist Studies. — 2007. — Vol. 40, Iss. 2. — URL: <https://www.sciencedirect.com/science/article/abs/pii/S0967067X07000165>.
- 12 Vatanever A. Is Russia building too many pipelines? Explaining Russia's oil and gas export strategy / A. Vatanever // Energy Policy. — 2017. — Vol. 108. — URL: <https://www.sciencedirect.com/science/article/abs/pii/S0301421517303221>.
- 13 Bradshaw M. Preparing for the new oil order? Saudi Arabia and Russia / M. Bradshaw et al. // Energy Strategy Reviews. — 2019. — Vol. 26. — URL: <https://www.sciencedirect.com/science/article/pii/S2211467X19300677>.
- 14 Aitzhanova A. A practical approach to oil wealth management: Application to the case of Kazakhstan / A. Aitzhanova et al. // Energy Economics. — 2015. — Vol. 47. — URL: <https://www.sciencedirect.com/science/article/pii/S0140988314002801>.
- 15 Ioan S. Green Diplomacy — The Chance to Mitigate the Effects of the Economic Crisis in the Context of Sustainable Development / S. Ioan // Procedia — Social and Behavioral Sciences. — 2013. — Vol. 81. — URL: <https://www.sciencedirect.com/science/article/pii/S1877042813014845>.
- 16 Klimes M. Water diplomacy: The intersect of science, policy and practice / M. Klimes et al. // Journal of Hydrology. — 2019. — Vol. 575. — URL: <https://www.sciencedirect.com/science/article/pii/S0022169419302069>.
- 17 Farnum R.L. Drops of diplomacy: Questioning the scale of hydro-diplomacy through fog-harvesting / R.L. Farnum // Journal of Hydrology. 2018. — Vol. 562. — URL: <https://www.sciencedirect.com/science/article/pii/S0022169418303378>.
- 18 Hassan M. Environmental diplomacy in South Asia: Considering the environmental security, conflict and development nexus / M. Hassan et al. // Geoforum. — 2017. — Vol. 82. — URL: <https://www.sciencedirect.com/science/article/abs/pii/S0016718516302615>.
- 19 Gu J. The BRICS and Africa's search for green growth, clean energy and sustainable development / J. Gu et al. // Energy Policy. — 2018. — Vol. 120. — URL: <https://www.sciencedirect.com/science/article/abs/pii/S030142151830332X>.
- 20 Feijóo C. Harnessing artificial intelligence (AI) to increase wellbeing for all: The case for a new technology diplomacy / C. Feijóo et al. // Telecommunications Policy. — 2020. — Vol. 44, Iss. 6. — URL: <https://www.sciencedirect.com/science/article/pii/S030859612030080X#!>.

- 21 Johnson M.F. Strong (green) institutions in weak states: Environmental governance and human (in)security in the Global South / M.F. Johnson // *World Development*. — 2019. — Vol. 122. — URL: <https://www.sciencedirect.com/science/article/abs/pii/S0305750X19301627>.
- 22 Li G. Does environmental diplomacy reduce CO₂ emissions? A panel group means analysis / G. Li et al. // *Science of The Total Environment*. — 2020. — Vol. 722. — URL: <https://www.sciencedirect.com/science/article/pii/S0048969720313024>.
- 23 Schweller R.L. Bandwagoning for Profit: Bringing the Revisionist State Back In / R.L. Schweller // *International Security*. — 1994. — Vol. 19, No. 1.
- 24 Clarke M. Kazakhstan's Multi-vector Foreign Policy: Diminishing Returns in an Era of Great Power 'Pivots'? / M. Clarke // *The Asan Institute For Policy Studies*. — 2015. — URL: <http://www.theasanforum.org/kazakhstans-multi-vector-foreign-policy-diminishing-returns-in-an-era-of-great-power-pivots/#7>.
- 25 Deyermund R. Matrioshka Hegemony? Multi-Levelled Hegemonic Competition and Security in Post-Soviet Central Asia / R. Deyermund // *Review of International Studies*. — 2009. — Vol. 35, No. 1. — URL: https://www.researchgate.net/publication/231901652_Matrioshka_hegemony_Multi-levelled_hegemonic_competition_and_security_in_post-Soviet_Central_Asia.
- 26 Schatz E. Access by Accident: Legitimacy Claims and Democracy Promotion in Authoritarian Central Asia / E. Schatz // *International Political Science Review*. — 2006. — Vol. 27, No. 3.
- 27 Cummings S.N. Eurasian Bridge or Murky Waters between East and West? Ideas, Identity and Output in Kazakhstan's Foreign Policy / S.N. Cummings // *Journal of Communist Studies and Transition Politics*. — 2003. — Vol. 19, No. 3.
- 28 Henriksen K. Kazakhstan's Energy in Foreign Policy: Oil and Gas in the Multi-vector Policy / K. Henriksen // *CORE*. — 2013. — URL: <https://core.ac.uk/display/30892619>.
- 29 Ipek P. The Role of Oil and Gas in Kazakhstan's Foreign Policy: Looking East or West? / P. Ipek // *Europe-Asia Studies*. — 2007. — Vol. 59, No. 7.
- 30 Bohr A. Central Asia: Responding to the Multi-Vectoring Game / A. Bohr // *Chatham House*. — 2010. — URL: https://www.chathamhouse.org/sites/default/files/public/Research/Americas/us0510_bohr.pdf.
- 31 Misiągiewicz J. Kazakhstan in the People's Republic of China's Energy Security Policy / J. Misiągiewicz // *CORE*. — 2019. — URL: <https://core.ac.uk/display/287177051?source=3>.
- 32 Gallo E. Eurasian Union versus Silk Road Economic Belt? / E. Gallo // *Policy Brief 159, Institute for Security and Development Policy*. — 2014. — No. 159. — URL: <https://www.files.ethz.ch/isn/184909/2014-gallo-urasian-union-versus-silk-road-economic-belt.pdf>.
- 33 Eckersley R. *Green Theory* / R. Eckersley // *International Relations Theories: Discipline and Diversity* / ed. by T. Dunne, et al. Fourth edition. — Oxford: Oxford University Press, 2016. — URL: https://minerva-access.unimelb.edu.au/bitstream/handle/11343/32050/Eckersley_282857_63361.pdf?sequence=5&isAllowed=y.
- 34 Eckersley R. *Environmentalism and Political Theory: Toward an Ecocentric Approach* / R. Eckersley. — New York: SUNY Press, 1992.
- 35 Barry J. Towards a model of green political economy: From ecological modernisation to economic security / J. Barry // *International Journal of Green Economics*. — 2007. — Vol. 1(3).
- 36 Hempel L.C. *Environmental governance: the global challenge* / L.C. Hempel. — Washington, D.C.: Island Press, 1996.
- 37 Hajer M. *The Politics of Environmental Discourse: Ecological Modernization and the Policy Process* / M. Hajer. — Oxford: Clarendon Press, 1995.
- 38 Gaworecki M. How important is corporate social responsibility to building a green economy? / M. Gaworecki // *Mongabay*. — 2016. — URL: <https://news.mongabay.com/2016/05/important-corporate-social-responsibility-building-green-economy/>
- 39 Nuryшева G. et al. *The Kazakh Ethical Tradition and Anti-nuclear Ethics* / G. Nuryшева et al. // *Energy Justice Across Borders* / ed. by G. Bombaerts et al. — Springer, Cham, 2019. — URL: https://link.springer.com/chapter/10.1007/978-3-030-24021-9_4.
- 40 *Kazakhstan Growth Forum 2014. Kazakhstan 2050 — A Roadmap to prosperity*. — URL: <https://cesec.kz/sites/default/files/files/Kazakhstan%202050.pdf>.
- 41 *Towards Green Growth*. — URL: https://read.oecd-ilibrary.org/environment/towards-green-growth_9789264111318-en#page3.
- 42 *Green Growth Indicators 2017: Highlights*. — URL: http://www.oecd.org/environment/indicators-modelling-outlooks/Highlights_Green_Growth_Indicators_2017.pdf.
- 43 *Global Resources Outlook 2019: Natural Resources for the Future We Want* — URL: <http://globalbusinesscoalition.org/global-governance-news/unep-irp-global-resources-outlook-2019-natural-resources-for-the-future-we-want/>.
- 44 *Kazakhstan: An Emissions Trade Case Study*. — URL: https://www.ieta.org/resources/Resources/Case_Studies_Worlds_Carbon_Markets/2016/Kazakhstan_Case_Study_2016.pdf.
- 45 Wheeler E. *Kazakhstan's Renewable Energy Quest* / E. Wheeler // *The Diplomat*. — 2017. — URL: <https://thediplomat.com/2017/05/kazakhstans-renewable-energy-quest/>.
- 46 *Address by the President of the Republic of Kazakhstan, Leader of the Nation, N.A. Nazarbayev*. — URL: http://www.akorda.kz/en/addresses/addresses_of_president/address-by-the-president-of-the-republic-of-kazakhstan-leader-of-the-nation-nazarbayev-strategy-kazakhstan-2050-new-political-course-of-the-established-state.
- 47 *Support for the Implementation of Wind Auctions in Kazakhstan*. — URL: <https://www.ebrd.com/work-with-us/projects/tcpsd/support-for-the-implementation-of-wind-auctions-in-kazakhstan.html>.
- 48 *Za 2019 god v moshchnosti kazhastana uvelichilis vdvoe [In 2019, capacity of renewable energy sources in Kazakhstan doubled]* // *Press service of the Prime Minister of the Republic of Kazakhstan*. — 2019. — URL: <https://primeminister.kz/en/news/za-2019-god-v-moshchnosti-vie-kazhastana-uvelichilis-vdvoe> [In Russian].
- 49 *Report on Renewable Energy Auctions in Kazakhstan: Results for 2018–2019*. — URL: http://ptfcar.org/wp-content/uploads/2020/01/Report-on-Kazakhstan-Renewable-Energy-Auctions-2018_2019_Eng_15012020-for-print-GD.pdf.

- 50 Astana International Finance Centre. — URL: https://gfc.aifc.kz/uploads/%D0%B1%D1%80%D0%BE%D1%88%D1%8E%D1%80%D0%B0_AIFC.pdf.
- 51 Sorbello P. Jobs at Stake in Kazakhstan's Energy Sector / P. Sorbello // The Diplomat. — 2020. — URL: <https://thediplomat.com/2020/04/jobs-at-stake-in-kazakhstan-energy-sector/>.
- 52 Scoot M. Green Growth 'Tigers' Can Help The Global Economy To Roar Once More / M. Scoot // Forbes. — 2020. — URL: <https://www.forbes.com/sites/mikescott/2020/04/28/green-growth-tigers-can-help-the-global-economy-to-roar-once-more/#6f7b365814fb>.
- 53 COVID-19 the 'biggest shock to energy system' in decades says IEA. — URL: <https://www.renewableenergyworld.com/2020/04/30/covid-19-the-biggest-shock-to-energy-system-in-decades-says-iea/>.
- 54 Tullo A. Why the future of oil is in chemicals, not fuels? / A. Tullo // Chemical & Engineering News. — 2019. — Vol. 97, Iss. 8. — URL: <https://cen.acs.org/business/petrochemicals/future-oil-chemicals-fuels/97/i8>.
- 55 Petrochemicals set to be the largest driver of world oil demand, latest IEA analysis finds. — URL: <https://www.iea.org/news/petrochemicals-set-to-be-the-largest-driver-of-world-oil-demand-latest-iea-analysis-finds>.
- 56 Borealis partners in world-scale Kazakhstan petrochemical project. — URL: <https://www.fircroft.com/blogs/borealis-partners-in-world-scale-kazakhstan-petrochemical-project-89551045593>.
- 57 Pickl M. The renewable energy strategies of oil majors — From oil to energy? / M. Pickl // Energy Strategy Reviews. — 2019. — Vol. 26. — URL: <https://www.sciencedirect.com/science/article/pii/S2211467X19300574>.
- 58 Kokemuller N. Sustainable Development and Corporate Social Responsibility / N. Kokemuller. — URL: <https://work.chron.com/sustainable-development-corporate-social-responsibility-5749.html>.
- 59 Corporate social responsibility (CSR). Invest Northern Ireland. — URL: <https://www.inbusinessinfo.co.uk/content/corporate-social-responsibility-environmental-impact>.
- 60 Astana International Finance Centre (2020) GFC: About Us. — URL: <https://gfc.aifc.kz/about-us/>.

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Қалпына келетін энергия мәселелеріндегі Қазақстанның сыртқы саясаты

Энергетикалық ауысу дәстүрлі энергетикада серпілісті инновация. Электр энергиясын өндіру матрицасындағы жаңартылатын энергияның үлесін 2030 жылға қарай 30 % және 2050 жылға қарай 50 % жетуді көздейтін Қазақстан Республикасының декарбонизация жөніндегі өршіл жоспары көптеген салаларда жаңа мүмкіндіктерді туғызады. Мақаланың мақсаты Қазақстанның көпвекторлы сыртқы саясат аясында мұнай саясаты мен жасыл дипломатияның даму болашағын зерттеу болып табылады. Зерттеу мәселесі: Қазақстанның шет елдермен қарым-қатынасы электр энергия өндірісінде жаңартылатын энергия үлесінің ұлғаюынан пайда көре ме? Жасыл теория қауіпсіздіктің, мемлекет пен экономиканың негізгі дәстүрлі құқықтық тұжырымдамаларына балама болып келіп, теориялық негіз ретінде қолданылады. Зерттеу нәтижелері экологияның Қазақстан Республикасының сыртқы саяси қатынастарын қалыптастырудағы рөлін көрсетуге мүмкіндік береді. Мақала авторлары тұрақты сыртқы саясат үшін Қазақстанның көпвекторлы сыртқы шеңберінде экоцентрлік саясат бағытын дамыту қажет деп санайды.

Кілт сөздер: Қазақстан, қалпына келетін энергия, жасыл теория, мұнай саясаты, жасыл дипломатия, көпвекторлы сыртқы саясат.

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Внешняя политика Казахстана в контексте вопроса о возобновляемой энергии

Энергетический переход представляет собой прорывную инновацию в традиционной энергетике. Амбициозная цель Республики Казахстан по диверсификации экономики, заключающаяся в достижении 30 % доли возобновляемой энергии в производстве электроэнергии к 2030 г. и 50 % к 2050 г., потенциально создает новые возможности в других секторах экономики. Целью данной статьи является изучение перспектив нефтяной политики и зеленой дипломатии в рамках многовекторной внешней политики Республики Казахстан. Вопрос исследования заключается в следующем: выиграют ли международные отношения Казахстана от роста производства электроэнергии из возобновляемых источников? Для анализа заявленной в статье проблематики авторы обратились к теории концепций, связанной с «зеленой» экономикой, которая предоставляет альтернативу основным традиционным теориям и концепциям безопасности государства и экономики. Результаты исследования позволяют показать роль экологии в формировании внешнеполитических связей РК. Авторы статьи полагают, что устойчивая внешняя политика требует развития экоцентрического направления политики в рамках казахстанской многовекторной внешней политики.

Ключевые слова: Казахстан, возобновляемая энергия, «зеленая» теория, нефтяная политика, «зеленая» дипломатия, многовекторная внешняя политика.