Introduction

Whilst the EU has made progress towards emissions reductions and climate neutrality, it has long realised that it cannot fight climate change on its own and is considering how it can help accelerate decarbonisation in other countries. In January 2021, EU foreign ministers adopted Council Conclusions on EU energy and climate diplomacy, and the European Commission and European External Action Service are now working on a Communication, with more specific follow-up actions due in Spring 2022.\(^1\)

At the same time, the EU is already providing considerable levels of climate finance, green investments through the European Investment Bank as well as having implemented taxonomy regulation that sets screening criteria to determine whether certain industrial activities significantly harm the environment. Additionally, the operationalisation of its new Neighbourhood, Development and International Cooperation Instrument (NDICI-Global Europe instrument), with climate-spending targets, demonstrates the bloc’s prioritisation of the issue.

A relevant country for transition and the EU’s green energy diplomacy is Kazakhstan. It has abundant potential for renewable energy production and is strategically
positioned in Central Asia. Yet the country is almost wholly reliant on oil and gas revenues to fund state activities, which also means that a reduction of demand from the EU could have problematic economic consequences. Assisting Kazakhstan’s transition could mitigate such risks, facilitate the country achieving carbon neutrality by 2060 and bolster the EU’s influence in the region.

This policy paper explores the potential of EU green energy diplomacy in Kazakhstan. It is part of a wider effort to consider how EU green energy diplomacy could be strengthened, considering its foreign policy positioning and support for the implementation of the Paris Agreement. It first takes a closer look at instruments and tools the EU has available or under construction for green energy diplomacy, then considers Kazakhstan’s energy and geopolitical positioning and EU-Kazakhstan relations, before concluding with policy recommendations for stepping up EU green energy diplomacy towards Kazakhstan.

**EU green energy diplomacy under construction**

At the heart of the EU’s transition strategy is the European Green Deal, accelerating an elaborate set of climate policies in place since the early 2000s. This ambitious package of policies is designed to climate-proof Europe’s future economy. Targets have been codified through the European Climate Law, which calls for a 55% reduction in carbon emissions by 2030 and climate neutrality by 2050. To achieve these goals, the European Commission tabled the “Fit for 55” package, a set of policies that are now in the legislative process. Part of the package is a Carbon Border Adjustment Measure (CBAM), which would place a carbon price on imports of electricity, iron, steel, aluminium and fertilisers that – if produced within the EU – face a similar carbon price through the EU Emissions Trading Scheme (ETS). This illustrates the EU no longer shies away from using “sticks” to convince others to follow its climate and energy policy developments.

However, greater recognition is also being paid to the importance of providing “carrots”, i.e. incentives to transition. Because the EU only represents about 8% of global emissions, a successful transition depends on others reducing emissions too. Moreover, the EU believes technologies required for climate neutrality and a switch from fossil to renewable energy sources will boost its international competitiveness in key markets. According to the above-mentioned Council Conclusions, the EU would need to facilitate external transitions and discourage all further investments into fossil fuel-based energy infrastructure projects in “third countries”.

EU energy diplomacy would “promote energy efficiency, the deployment of safe and sustainable low-carbon technologies, the increasing uptake and system integration of renewable energy, and the highest environmental, nuclear safety and transparency standards.” A call is made for “further deepening international cooperation on hydrogen, to strengthen efforts to produce and enable import of renewable hydrogen in particular”.

To achieve these objectives, the EU has various instruments and tools at its disposal or that are “under construction”:

1. **Taxonomy Regulation** is a list of sustainable economic activities to better clarify the true environmental impact of investments by corporations. The labelling could be used for policies to incentivise or disincentivise specific investments.

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2. **EU Fund for Sustainable Development (EFSD+)** is a plan to use public funds to facilitate private investments in environmental assets and multiply the value to meet designated UN Sustainable Development Goals.6

3. **Neighbourhood, Development and International Cooperation Instrument (NDICI – Global Europe Instrument)** will cover the majority of EU external spending. At least 30% of NDICI spending needs to be climate-related, and all of its expenses need to be Paris Agreement proof, meaning not supporting fossil and in line with a countries’ own Nationally Determined Contribution (cf article 29 of NDICI regulation).7

4. The EU is a staunch supporter of the **NDC Partnership**, that helps countries to develop Nationally Determined Contributions, i.e. their “climate pledges”. It has its own programme for Strategic Partnerships for the Implementation of the Paris Agreement (SPIPA) that covers almost all countries including Kazakhstan and with some countries separate partnerships are in place to for instance cooperate on renewable energy technology development, green hydrogen or the exploration of rare earth elements.

5. **Trade agreements**, such as the Enhanced Cooperation Partnership Agreement (ECPA) between the EU and Kazakhstan, include cooperation intentions in areas such as climate and energy, meaning that the EU could link energy transitions to wider trade objectives.8

6. **Connectivity Partnerships** offer another route to channel renewable transition action. These partnerships prioritize EU support for sustainable infrastructure and climate friendly connectivity in target countries, whilst also pooling resources to support infrastructure financing regionally. This is modelled on the EU-Asia Connectivity Strategy of 2018. In her 2021 State of the Union speech, Commission President Von der Leyen mentioned that ‘Global Gateway’ loans would serve as another channel to direct infrastructure and energy investments, however, details are limited.

The question is if these instruments can generate sufficient impact and whether new instruments would be needed? What instruments are most suitable for the transition challenges of countries the EU would like to support, what type of investments are likely to contribute most to decarbonisation in a longer-term perspective, what are the right standards, e.g. for green hydrogen in place, and is it possible to disincentivize private actors from continuing fossil fuel investments?

**Domestic Importance of Energy in Kazakhstan**

Kazakhstan’s politics and regional outlook is significantly defined by energy. Oil and natural gas exploration, refinement and distribution have been a core part of the region’s economy since the Soviet era. The country ranks 17th in the world for annual crude oil production, 24th for natural gas and 9th for coal extraction.9 In 2018, the President of Kazakhstan’s Central Bank admitted that 85% of the country’s economy was dependent on oil and gas exports.10 During the Covid-19 pandemic the lower oil prices resulted in 20% lower revenues for the government.11

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10 Economic Section of the Embassy of the Kingdom of the Netherlands in Kazakhstan, Special Energy Issue, (Nur-Sultan: Embassy of the Kingdom of the Netherlands in Kazakhstan, 2018).

During the December 2020 UN Climate Ambition Summit, Kazakhstan’s President Tokayev announced that Kazakhstan will achieve carbon neutrality by 2060. Moreover, the President has committed to targets of 30% of all electricity to be generated by renewable sources by 2030 and 50% by 2050. This comes on the back of introducing new renewable auction processes, strengthening regulatory frameworks and submitting targets of reducing greenhouse gas emissions by 15% by 2030, as part of their Paris Agreement NDC. In September 2020, the President furthermore positioned green growth policies at the centre of the state budget for the first time in the country’s history.

Kazakhstan also introduced an emissions trading scheme in 2013, applying to around 225 industrial entities whose emissions exceed 20,000 tons of CO₂ each year and are involved with power, centralized heating, extractive and manufacturing industries. Yet, Kazakhstani emissions are currently still rising.

Because of low population density and geography, Kazakhstan is well positioned to generate renewable energy. Large-scale installations can be easily built in the mainly flat steppe landscape with high wind speeds. Southern Kazakhstan receives high and consistent levels of solar radiation. Hydropower is also prevalent in the eastern and southern parts of the country, accounting for 13% of the total national energy generating capacity.

However, only 3% of electricity generation is from renewable sources and Kazakhstani firms are hardly involved. During a 2019 auction for renewable contracts, 145 companies from 12 countries took part, including Bulgaria, China, France, Germany, Italy, Malaysia, the Netherlands, Russia, Spain, Turkey and the UAE. Some of the investors were backed by funding from companies from other countries, such as China, meaning it is difficult to identify exactly which countries are most heavily investing in Kazakhstan’s renewable future. Moreover, investments into the electricity grid have been limited. State-owned Kazakhstan’s Electricity Grid Operating Company (KEGOC) runs on outdated Russian software that is ill suited for the integration of renewable electricity; the Asian Development Bank says that an investment of $1.4 billion is needed to increase renewable energy electrification by just 3%. Grid hardware depreciation is also a risk, yet specifics are hard to ascertain. Thus, there is still a long way to go to meet the President’s energy transition ambitions. Also, a difficult and strategic question is to what extent, in the long run, hydrogen produced from renewables, can become a new export product and to which markets.

As of 2021, renewables are regulated by the Department for Renewable Energy, under the Ministry of Energy banner. Coordination of renewable energy is assigned to a small government unit that has limited human resource capacity.
resources, technical capacity and experience. The decision-making power rests with the Ministry of Energy, which has many years of experience with oil and gas but limited experience with governing renewables. Expanding the Department for Renewable Energy's responsibilities and autonomy might be an important first step to move closer to the energy transition ambitions.

### Energy as the focal point of Kazakhstan’s’ international relations

Kazakhstan’s fossil dependency resembles that of the country it is most connected to, Russia. Kazakhstan is part of the Moscow-led Collective Treaty Security Organisation (CSTO) and Russia still maintains 7 permanent bases and leases over 11 million acres of land within the country.\(^\text{22}\) Russia and Kazakhstan are also members in the Eurasian Economic Union (EAEU), an economic integration organization that was originally modelled as a customs union. Despite close economic and security ties, Kazakhstani policymakers are attempting to keep Russia as well as other countries such as China and the US at an arm's length given their fears over overreliance on one country. To this end, Kazakhstan has been pursuing a multi-vector foreign policy to balance bilateral and regional relationships and reduce dependency on one or several countries.

Kazakhstan occupies a vital geographic location within Beijing’s Belt & Road ambitions. The Kazakhstani government in Nur-Sultan conversely sees developing the country as a Eurasian transport and logistics hub to partially diversify its economy. China has already built 5 train lines and 6 international highways through the country.\(^\text{23}\) On the ground, its investments in coal and non-renewables extraction and production reduce the incentive to accelerate the transition. However, Kazakhstani policymakers are also wary of falling too close to China for fear of losing economic independence the same way other Belt and Road Initiative (BRI) participating countries have.

Further out, Kazakhstan also maintains friendly relations with the US. American energy companies Chevron and ExxonMobil led the development of oil and gas fields in the Caspian Sea shortly after the country gained independence. Moreover, Kazakhstan had a close security relationship with Washington, allowing American troops and equipment to be transited through the country during military operations in Afghanistan and Iraq. The US recognised the strategic importance of the country and in September 2020, the U.S.-Kazakhstan Business Council was launched by the US Chamber of Commerce to boost bilateral trade up from $2 billion.\(^\text{24}\)

Turkey and Iran also have energy interests in the country. In 2021, Iran pledged to expand bilateral trade to over a $1 billion in the next 3 to 5 years and Iranian energy companies are currently building a 50-megawatt wind power plant.\(^\text{25}\) Similarly, Turkey is shoring up its energy supply through the formation of the Turkic Council and plans to pump Kazakhstani oil through the Baku-Tbilisi-Ceyhan pipeline.\(^\text{26}\)

Kazakhstan’s desire to maintain strategic independence is also evident in its regional relations. By virtue of history, geography and economics, it plays one of the key roles in the Central Asian community. The resolution of the Caspian Sea dispute in 2018 eased relations with Turkmenistan and the Uzbek economy’s liberalisation between 2016-17 could facilitate greater cross-border trade, especially energy, although the region

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\(^{22}\) KJ Reports, “Geopolitics of Kazakhstan: Between Chinese Dragon and Russian Bear”, YouTube Video, 8:34, November 22 2019.

\(^{23}\) KJ, “Geopolitics of KAZAKHSTAN”.


remains one of the worst connected globally. The country effectively acts as a lynchpin for the region to multilateral engagement, being a member of the Organisation for Security and Cooperation in Europe, Organisation of Islamic Cooperation, Shanghai Cooperation Organisation, Commonwealth of Independent States, as well as leading the creation of the Eurasian Economic Union. Thus, Kazakhstan position can open greater regional access for external powers such as the EU.

**Current EU-Kazakhstani Energy Relations**

The geopolitical situation Kazakhstan finds itself in has, in large part, driven Nur-Sultan closer to the EU. By engaging Western Europe in particular, Kazakhstan policymakers believe it can act as a counterweight to the disproportionate influence of Russia and China. They look more to individual countries than to the EU, since the latter is using a regional approach to Central Asia and has not included this region in its neighbourhood policy, which restricts options available for funding and capacity building.

The EU represents Nur-Sultan’s largest export partner, with 41% of all exports in 2020 heading there. European oil companies spearheaded the development of major oil and gas fields, such as the Kashagan field. The field’s current holding company, North Caspian Operating Company (NCOC) includes European companies such as Eni (Italy), Total (France) and Shell (Netherlands & UK), each holding a 16.81% share. These European energy companies still are proactive in the exploration and excavation of Kazakhstani fields. This creates a paradoxical situation that while the EU is advocating for climate action and clean energy capacity, companies operating from its territory still invest in fossil fuel development in Kazakhstan.

Most importantly, 80% of Kazakhstan’s energy exports go to the EU and it is estimated that overall EU demand for oil imports will decrease by 78% after 2030; natural gas imports are expected to drop by 58–67%. Fall in European demand would not only disproportionately impact Kazakhstani revenues but also have severe deflationary impacts on global energy prices, further worsening the profitability of hydrocarbon exports, even though in the short-term prices may still be high.

Europe and Kazakhstan have both recognised this and Europe is currently the largest investor and technical supporter in renewable projects. Traditional oil and gas companies have also shown some interest towards renewables, such as Shell’s support for a 50MW solar power plant in the Jambul region. However, it is the European Bank for Reconstruction and Development (EBRD) that has been the key actor in this regard. To date, the bank has invested €8 billion cumulatively in over 281 projects, with first-of-their-kind investments in wind installations such as the Zheruyik Wind Power Plant (€70 million in 2014) demonstrating that volumes are substantial. The EBRD has also helped facilitate European firms like Siemens enter the Kazakhstani market and the national government in drafting a power production transmission plan in collaboration with the US.

The European Investment Bank (EIB), which is an EU institution, has a 5% stake and sits on the EBRD’s board, in addition to partnering on numerous Central Asian projects. Another big European funder of the low-carbon transition is the German Development Cooperation (GIZ), who

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is supporting the development of a low emission strategy.

Green energy transition opportunities and challenges in Kazakhstan

Based on interviews with experts, an overview is presented here of opportunities and challenges for the green energy transition in Kazakhstan. The overview is not based on a technical analysis of the energy sector, and merely illustrates which options could be considered for further exploration:

- **Energy efficiency** is clearly an area where gains can be made and both the EBRD and EIB are already investing in this field with interest by other donors, such as the GIZ. New houses are needed, and better insulation is highly needed in older residential buildings.

- **Private renewable energy generation capacity** in Kazakhstan is extremely low. The EU could help devise subsidies and create access to the Kazakhstani market for companies in private renewable generation. There is scope within the *Boosting Investment in Renewable Energy* guarantee to support this, but since Kazakhstan falls outside of the EU’s Eastern Neighbourhood policy, this is currently not possible.32

- **Renewable grid infrastructure** is another field where EU support could help. This requires both capacity building and bringing in expertise from abroad as funding for technical improvements.

- **Green hydrogen production** is a promising opportunity. Kazakhstan has ambitions to use hydrogen as a by-product produced from solar and wind production (3 million tons) and turn that into a renewable source.33 The EU pushes for ‘green hydrogen’ production globally through the ‘Europe Clean Hydrogen Alliance’, a partnership of over 1000 public and private actors who can take advantage of EU financing to scale up production and distribution capabilities, with the aim of generating €180-470 billion by 2050.34 In June 2021, German hydrogen developer Svevind and Kazakh Invest signed a Memorandum of Understanding to develop 3 million tonnes of green hydrogen a year and increase renewable capacity to 45GW, a substantial increase on the 20GW currently installed in the country.35

- **Exploring the potential for mining of critical materials and metals (including rare-earths)** is another vital part of the energy transition that often gets overlooked. Rare-earth elements have critical usage in renewable technologies such as wind turbines, solar panels and electric batteries. China dominates the market; the EU imports 98% of its rare-earths from there.36 Given the high presence of rare earths in uranium tailing, cooperation with Kazakhstan offers a great opportunity, as they are the world’s largest uranium producer (42% of global supply in 2019).37 The EU could develop this potential by providing modern extraction technology and encouraging financing. It could also consider encouraging Kazakhstan’s participation in European Raw Materials Alliance (ERMA). Moreover, Kazakhstan is abundant in lithium, vital in batteries. Integration of this resource might be achieved through the European Battery Alliance (EBA). Finally, the announcement of the Global Gateway partnerships alludes to the need for the EU to become secure supply of raw materials for chips

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33 Zholdas Orisbayev, “Kazakhstan unveils ambitious green-hydrogen project”, eurasianet, July 8 2021.


36 Finbarr Bermingham, “China’s rare earth dominance casts shadow over Europe’s ambitious climate targets,” South China Morning Post, February 25 2021.

37 Enerdata, “Kazatomprom (Kazakhstan) extends its 20% uranium production cut until 2023”, Enerdata Intelligence & Consulting, July 6 2021.
and semi-conductors, and a partnership with Kazakhstan could utilise this framework.\textsuperscript{38}

However, there are also challenges to harvest these energy transition opportunities and these include:

- **Continued reliance on fossil industry** and vested interests are intricately connected to political elites. Whilst President Tokayev has declared urgency in combatting climate change and supporting a transition, the financial value of continuing with non-renewable production and exports means that there is limited incentive at a Ministry of Energy level to match the President’s urgency. Individuals and institutions who benefit from the status quo have a lot to lose if non-renewable production is limited and the oil money dries up. Moreover, the oil and gas industry is a large source of employment and unless these jobs are replaced through the green transition, the country could face the risk of social unrest and/or strikes.

- **Government subsidies for fossil fuels**, conveyed through price caps and export bans mean that renewables have higher price points; 3\% of the country’s GDP goes into this implicit subsidy.\textsuperscript{39}

- **Business ethics** dis-incentivising public and private investment. Despite efforts by Kazakh Invest to improve the attractiveness of Kazakhstan, foreign investments are still often impeded by anti-corruption diligence rules in the foreign countries of origin. Finally, the Kazakhstani government demands developmental loans to be paid in the local currency, yet this leads to high exchange risk, in part driven by anti-trust and corruption concerns.

- **Investors continuing fossil fuel investments.** A key dilemma for the EU is that fossil fuels continue to be a draw for international investors including European ones, especially those seeking shorter-term returns. Thus, there are genuine risks that these investors are lured away from EU–supported green projects in Kazakhstan and even push the government to enhance support for its fossil fuel sector.

- **Kazakhstan is not part of the EU’s neighbourhood policies** and therefore misses out on opportunities, such as the EIP or EFSD+. In the NDICI, Kazakhstan falls under the ‘Asia and Pacific’ region, which limits the amount of funding available. Of the €60 billion dedicated to geographic-specific spending, only €8.49 billion is dedicated to Asia, covering all thematic areas.\textsuperscript{40} Moreover, the EU sees Kazakhstan as more economically developed, disqualifying it from accessing funding ringfenced for developing economies.

**Towards larger EU support for the green energy transition in Kazakhstan**

Despite these challenges, the EU intends to step up green energy diplomacy, and the forthcoming Communication on this topic, may be relevant for Kazakhstan, as it is increasingly realising that it needs to move out of its high fossil dependency. This would also enable it to develop its tremendous renewable generation potential and could increase its autonomy from big powers vying for influence. For the EU, the country is a strong case in point for stepping up green energy diplomacy efforts. In order to do so it could consider the following recommendations:


• Increase the funding opportunities by EIB towards actual financing of renewable infrastructure and find ways to slowly ween off investments which might lock in carbon dependencies.
• Discuss the implications of CBAM and the taxonomy, which could utilise the International Platform on Sustainable Financing as a framework to offer clarification on the impacts for Kazakhstan.
• Support an improvement/upgrade of the Kazakhstan electricity grid to include renewable source generation and enhance both software and hardware infrastructure.
• Implement a system of incentives and penalties to disincentivize European energy firms from investing in Kazakhstani oil and gas. This could be achieved by further strengthening of taxonomy regulations or a separate classification system.
• Continue to leverage EBRD in the country to grow on-the-ground intelligence and confidence by both foreign investors and Kazakhstani stakeholders.
• Accelerate involvement of Kazakhstani companies domiciled in Europe in the European Clean Hydrogen Alliance to increase awareness and engagement of Kazakhstani energy stakeholders.
• Step up support for Kazakhstan through the Strategic Partnerships for the Implementation of the Paris Agreement programme and encourage the NDC partnership to pay more attention to the country.
• Consider financial and technological support to explore rare earth availability and lithium mining potential in Kazakhstan for batteries and other clean energy technologies. Also accelerate discussions of Kazakhstani companies’ participation in European Raw Materials Alliance and the European Battery Alliance to synergise producers and extractors into European value chains.
• Offer greater detail regarding the industry and country scope for ‘Global Gateway’ partnerships and work to integrate strategic Kazakhstani raw material sectors into EU value chain.
• Offer greater clarity to the Enhanced Cooperation Partnership Agreement’s focus on energy and transitioning; specific actions to link Kazakhstan’s transition to overall trade relationships through carrots and sticks might help sharpen bureaucratic and private attention to the topic.
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Clingendael – the Netherlands Institute of International Relations – is a leading think tank and academy on international affairs. Through our analyses, training and public debate we aim to inspire and equip governments, businesses, and civil society in order to contribute to a secure, sustainable and just world.

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