

# Public-private discussion on sustainable infrastructure for the decarbonisation of hard-to-abate industries in Kazakhstan

3 July 2023, Astana

## *Summary of discussions*

### *Welcoming remarks*

**Gabit Mukhambetov**, General Director of KazStandard, the national agency of metrology, opened the Roundtable. Standardisation is an important vector of action for industrial decarbonisation in Kazakhstan, both through the activities of KazStandard and the Committee on Technical Regulation and Metrology under the Ministry of Trade and Integration. KazStandard has been partnering with the OECD to develop domestic capabilities on the topic of ISO standards for carbon neutrality, strengthen the national standard and certification framework for monitoring, reporting and verifying GHG emissions from industrial activities, and raising awareness among industrial actors on the importance of these standards, including in the context of the implementation of the EU-led Carbon Border Adjustment Mechanism (CBAM). Moving forward, the development of a taxonomy of green projects and industrial activities will be critical.

**Saule Sabieva**, Director of the Department of Climate Change Policy and Green Technologies, noted Kazakhstan's recent adoption of its Strategy for Low Carbon Development by 2060, which provides directions for the industrial sector's contribution to the country's pathway to net-zero. Given the substantial financing necessary to achieve the objectives of the Strategy, Kazakhstan is hoping that the international financial community will contribute to the country's investment needs for decarbonisation, estimated at USD 610 billion by the Ministry of National Economy. The government is already planning a number of actions in order to achieve its 2030 climate targets, among which an increase of the share of renewable energy sources (RES) in total energy supply (TES) to 15% and the development of fiscal incentives to support the adoption of Best Available Techniques (BAT) in industry.

**Peline Atamer**, Head of the Sustainable Infrastructure Programme in Asia (SIPA) in Central Asia, highlighted the importance of industrial decarbonisation in the context of national roadmaps to carbon neutrality, in particular in hard-to-abate sectors. To a certain extent, this topic has been a blind spot of international and national policy agendas for net-zero thus far. For example, a very recent OECD research based on the analysis of 51 countries, finds that in the aftermath of COVID-19 only 4% of total public funding for innovative low-carbon technologies were directed at the industry – while 40% were directed at the energy sector. The issue is nevertheless gaining traction, as exemplified in the recent creation of the Climate Club under the G7. While facing similar challenges to other economies, Kazakhstan has made progress on promoting more energy efficient, environmentally sustainable industrial practices, notably through the adoption of recent environmental regulations aligned on OECD standards and good practices such as the BATs. More needs to be done however, to (i) send clear, long-term signals to investors and private sector actors, (ii) make sure that recently adopted environmental regulations are effectively implemented, (iii) strengthen the framework for low carbon technology adoption and scale-up, and (iv) promote viable financing solutions for the decarbonisation of industry.

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## *Setting the scene: The importance of industrial decarbonisation for achieving net-zero in Kazakhstan*

**Kuanysh Beisengazin**, Deputy Chairman of the Economic Research Institute (ERI) of Kazakhstan, outlined a number of policy and technology options for industrial decarbonisation in Kazakhstan, noting that the ERI is planning to work on a sectoral decarbonisation roadmap for the industry, building on the overarching ideas set out in the country's Low Emission Development Strategy (LEDS) adopted in February this year. The elaboration of the Strategy has had benefits as it has enabled to raise awareness and engagement of stakeholders across sectors – who have gone from asking “why” to asking “how” to decarbonise. In the short term, it is crucial to facilitate the adoption of new technologies that can support carbon mitigation and reduction targets and ensure that signals are sent to the business sector which make technology switching economically attractive. Efficiency improvements and better waste management and circular economy practices are needed in metallurgy, notably for aluminium and ferrous metals, areas where the government is working to support action from the private sector. The implementation of CBAM, in particular, is giving an impetus to these needs. As of today, the integration of new, clean technologies such as green hydrogen in industrial activities is raising a lot of questions to which there are no clear answers.

Presenting an overview of the economic, industrial and technological policy context for Kazakhstan, **Luke Mackle**, Analyst at SIPA, OECD, outlined a number of the key challenges facing policymakers and the private sector in the country. Some of the country's hard-to-abate sectors have a particularly large economic importance, which combined with the role of cheap fossil fuels in maintaining low production costs and international competitiveness of tradeable industrial products, is creating obstacles to establishing a viable decarbonisation pathway for these sectors. Decarbonising many of Kazakhstan's hard-to-abate sectors involves challenges that are common across the OECD, notably the lack of market-ready low emissions technologies that can competitively replace current industrial processes reliant on fossil fuel energies, but the extremely low level of carbon pricing in Kazakhstan and the carbon intensity of the grid further complicates the industrial decarbonisation agenda. The way forward should include (i) developing demand-side policies to shape industrial and consumer choices, (ii) effective co-operation between different policy and regulatory issues, and (iii) ensuring a degree of agility and experimentation in developing policy interventions to support industrial decarbonisation.

### *Session 1: Overarching strategic and policy frameworks for decarbonising hard-to-abate industries*

Representing the Ministry of Industry and Infrastructure Development of Kazakhstan, **Azamat Banbayev**, Chairman of the Industrial Development Committee, welcomed a timely discussion on an important topic for the national economy. The Ministry is working to support the implementation of BATs, drawing on international and OECD experience, notably in the mining and metallurgy sectors. As the steel sector has the largest carbon footprint among domestic industries, studies are being carried out for its decarbonisation through the usage of hydrogen. In the aluminium sector, the usage of electricity produced from renewables is a key avenue for decarbonisation, but this necessitates huge investments, and the government is looking for partners from the private sector. Kazakhstan is also working on broader, cross-sectoral measures. A recent amendment to the Energy Conservation and Energy Efficiency Law foresees new monitoring requirements for energy usage in the industrial sector. Further policy actions may be necessary to realise efficiency improvements in the industrial sector, such as increasing access to green finance, partial guarantees and subsidies. The Ministry is keen to co-operate with international organisations and benefit from international experience to move this agenda forward.

**Viktoriya Baigazina**, Director of the Project Management Department at the International Green Technologies and Investment Projects Centre (IGTIPC), further developed the topic of BAT implementation, and outlined the Centre's aim to establish a national BAT bureau. IGTIPC is in charge of developing sectoral

BAT reference documents (BREF) and has already submitted 12 BREFs to the Ministry of Ecology and Natural Resources. 14 more BREFs are to be developed between 2024 and 2027. In addition, IGTPC has launched the Global Cleantech Innovation Programme, which aims at promoting cleantech innovation and entrepreneurship in SMEs, with the support of UNIDO. The Programme supports the commercialising of innovations that could support decarbonisation through grants and mentorship. The objective is to support between 20 and 30 projects every year.

**Seitgaly Galiyev**, Head of the Department for Mining Systemology at the Mining Academy of Kazakhstan, gave a detailed overview of the challenges and opportunities for decarbonisation in Kazakhstan's mining sector. There is currently unrealised potential for efficiency gains by using technologies already commercially and competitively available, as the sector could see a 15% reduction in CO<sub>2</sub> over the next few years simply by optimising the use of technologies that are already deployed in mining sites, and a further 25-30% reduction by switching diesel-powered mining equipment to gas-powered equivalents. Within the country the vast majority of extracted mineral goods are transported by road rather than rail, due in part to the geographically dispersed nature of mining sites and the lack of rail infrastructure in these areas. Addressing this infrastructure challenge represents a potential source of GHG reduction.

**Deger Saygin**, Industry Lead at the Clean Energy Finance and Investment Mobilisation Programme (CEFIM) of the OECD Environment Directorate, gave an overview of the programme's work on supporting industrial decarbonisation, both in OECD and non-OECD contexts. The OECD Framework for Industry's Net-Zero proposes a 5-step process to identify, through stakeholder consultations, pipelines of projects for decarbonising industries in specific sectors or through specific clean technologies, along with financing options. The work enables to identify good practices relating to enabling conditions for business models, investment de-risking and financing.

The session was concluded with a presentation from **Stephen Cummins**, Head of Industrial Decarbonisation Strategy at the UK Department for Business, Energy and Industrial Strategy, which gave a comprehensive overview of the UK's approach to the development of its industrial decarbonisation framework. In the UK, GHG emissions are concentrated in clusters of hard-to-abate industries, including iron, steel, chemicals and cement. Those clusters have a potential to play a catalytic role in the national decarbonisation agenda. The UK was already able to reduce its industrial emissions by more than 50% thanks to energy efficiency measures and fuel switch. In its [industrial decarbonisation strategy](#) adopted in March 2021, the UK sets the goal reduce emissions by at least two thirds by 2035 and by at least 90% by 2050, and lays out the means to achieve these goals. As one of the means to mobilise the capital and efforts needed for achieving the net-zero transformation of its industry, the UK has launched its new ETS in May 2021, which is aligned with the EU's. The years 2020s will be critical for scaling-up existing technologies, electrifying processes and working on energy and resource efficiency. The second stage will focus on high temperature electrification and hydrogen and CCUS development, and a third stage on connecting smaller industrial sites to infrastructure for decarbonisation (which will first be developed in clusters). As regards financing, the government is planning to play a de-risking role, and policy initiatives such as creating localised industrial decarbonisation competitions are meant to foster finance and investment for the transition.

## *Session 2: Standards for supporting the low-carbon transition of industries*

The session was opened by **Blair Blackwell**, Advisor of Corporate Programs and Low Carbon Projects, Chevron, and member of the Foreign Investors Council (FIC) of Kazakhstan. The FIC created a Low Carbon Working Group which works in four main action areas: (i) carbon pricing in Kazakhstan, (ii) mapping of the policy space for industrial decarbonisation, (iii) carbon capture usage and storage (CCUS), and (iv) hydrogen. International investors, many of which are facing corporate pressure to decarbonise their activities in Kazakhstan, are eager to increase their investments into low-carbon activities and technologies, need more regulatory certainty and predictability to be able to follow through with meaningful levels of investment.

International industrial firms place particular importance on CCUS technologies given concerns around the medium- to long-term prospects for decarbonising the energy grid in Kazakhstan.

A presentation from **Berrak Eryasa**, Policy Analyst at the Environment, Health and Safety Division of the OECD Environment Directorate gave an overview of OECD work on BAT, highlighting the involvement of Kazakhstan in this work. The BAT working group is looking specifically at two sectors of particular importance to Kazakhstan – steel and aluminium. Through this working group, the OECD is collecting useful information about promising technologies and their implementation readiness levels. The OECD is also looking at how BATs can support and promote innovation for decarbonising industries. The OECD will hold an expert working group meeting on 8-10 November.

The final intervention of the session came from **Danielle Pernigotti**, CEO of consultancy Aequilibria and expert on standards for carbon management in industry. In the past twelve months the discourse in Kazakhstan concerning industrial decarbonisation evolved in a positive direction. Nevertheless, carbon pricing remains a *sine qua non* condition for developing an environment where industrial decarbonisation becomes economically viable. Standards are also pivotal for moving forward this agenda, as internationally agreed standards upon carbon accounting will help ensure that the cost of one tonne of CO<sub>2</sub> is comparable across jurisdictions. Under SIPA, trainings were already provided in Kazakhstan on ISO standards 14065 on requirements and 14066 on competence for validation and verification teams. New ISO standards are being developed on carbon neutrality, for enhancing carbon accounting, offsetting and communication on calculation methods, enhancing transparency and confidence, and reducing risks of greenwashing. Governments can also take useful steps to support the decarbonisation of industries. In France, for example, the Agency for Ecological Transition (ADEME) has put in place a useful tool to mobilise firms' top management in formulating ambitious targets for transitioning to net-zero.

### *Conclusion and next steps*

The OECD provided a recap of key avenues highlighted in the discussion for moving the industrial decarbonisation agenda forward:

- The **need for policymakers to send strong signals** to all stakeholders, with clear and credible commitments to raising **carbon price** and **clear commitments to net-zero pathways** for the whole economy and across sectors. Clear assignment of roles and responsibility in designing these pathways and ensure follow-through (for specific sectors in particular) is necessary to ensure leadership, effective co-ordination, and robust implementation.
- **Science, technology, and innovation policies** conducive to the dissemination of low-carbon technologies, focusing on low-regret, readily available technologies and upgrades in the short term, and working on mid- to longer-term scenarios for those not yet commercially viable such as CCUS and green hydrogen.
- The **development of necessary infrastructure** (e.g. electricity grid, hydrogen pipelines, CO<sub>2</sub> storage).
- The need to work on **financing solutions**, at scale through co-operation with multilateral banks and by implementing cross-cutting policies aimed at attracting private capital, and through targeted measures for enhancing access to finance and support SMEs' transition efforts in particular.

As next steps to the Roundtable, the OECD and SIPA will continue to discuss with the different government stakeholders present and provide support via the dissemination of international standards and good practices as well as peer-to-peer learning in the areas highlighted in the discussions. This support includes the delivery of a two-day training on ISO standards for carbon management delivered on the 4-5 July to a group of experts from Kazakhstan and from representatives of National Standardisation Bodies of Kyrgyzstan, Uzbekistan, Tajikistan and Turkmenistan invited by Kazstandard with the support of SIPA.

## *Meeting agenda*

14:00-14:30	<i>Registration and welcome coffee</i>
	<b>Welcome and introductions</b>
14:30-14:45	<b>Welcoming remarks</b> <ul style="list-style-type: none"> <li>- Gabit Mukhambetov, General Director of KazStandard</li> <li>- Saule Sabieva, Acting Director of the Department of Climate Change Policy and Green Technologies</li> <li>- Peline Atamer, Head of SIPA – Central Asia, OECD</li> </ul>
14:45-15:00	<b>Setting the scene: The importance of industrial decarbonisation for achieving net-zero in Kazakhstan</b> <ul style="list-style-type: none"> <li>- Kuanysh Beisengazin, Deputy Chairman, Economic Research Institute</li> <li>- Luke Mackle, Policy Analyst, SIPA – Central Asia, OECD</li> </ul>
	<b>Public-private dialogue on the policy framework for and barriers to industrial decarbonisation</b>
15:00-16:00	<b>Session 1: Overarching strategic and policy frameworks for decarbonising hard-to-abate industries</b> <p><i>Session 1 will introduce policies and strategies for decarbonising hard-to-abate industries. The discussion will focus on policy frameworks and national strategies, initiatives and approaches for mobilising actors of the private sector. The OECD will share its expertise and international experience.</i></p> <p><b>Moderator:</b></p> <ul style="list-style-type: none"> <li>- Bakhyt Yessekina, Director of the Green Academy</li> </ul> <p><b>Speakers:</b></p> <ul style="list-style-type: none"> <li>- Azamat Panbayev, Chairman of the Industrial Development Committee, Ministry of Industry and Infrastructure Development of Kazakhstan</li> <li>- Viktoriya Baigazina, Director of Project Management Department, International Green Technologies and Investment Projects Center</li> <li>- Deger Saygin, Industry Lead, Clean Energy Finance and Investment Mobilisation Programme, Environment Directorate, OECD (<i>online</i>)</li> <li>- Stephen Cummins, Head of Industrial Decarbonisation Strategy, UK Department for Business, Energy and Industrial Strategy (<i>online</i>)</li> </ul> <p><i>Open discussion</i></p>
16:00-16:30	<i>Coffee Break</i>

16:30-17:30	<p><b>Session 2: Standards for supporting the low-carbon transition of industries</b></p> <p><i>Session 2 will discuss the role of industrial standards, developed at the national and international levels, in driving the low-carbon transition of industries. Participants will share insights on the use of Best Available Techniques, as well as ISO and other relevant standards in Kazakhstan and in the OECD.</i></p> <p><b>Moderator:</b></p> <ul style="list-style-type: none"> <li>- Ardak Shambetova, Head of the Coordination on Technical Regulation, KazStandard</li> </ul> <p><b>Speakers:</b></p> <ul style="list-style-type: none"> <li>- Seitgaly Galiyev, Head of the Department for Mining Systemology at the Mining Academy of Kazakhstan</li> <li>- Blair Blackwell, Advisor of Corporate Programs and Low Carbon Projects, Chevron, and member of the Foreign Investors Council of Kazakhstan</li> <li>- Berrak Eryasa, Policy Analyst, Environment, Health and Safety Division, Environment Directorate, OECD (<i>online</i>)</li> <li>- Daniele Pernigotti, CEO, AEquilibria</li> </ul> <p><i>Open discussion</i></p>
<b>Discussion of the next steps and wrap-up</b>	
17:30-18:00	<ul style="list-style-type: none"> <li>- Group discussion</li> <li>- Peline Atamer, Head of SIPA – Central Asia, OECD</li> </ul>

### **Background: the Sustainable Infrastructure Programme in Asia (SIPA)**

Infrastructure is essential for economic development but accounts for about 60% of GHG emissions globally. Given the long lifespan of infrastructure assets, the investment decisions made today could lock countries into carbon-intensive development pathways for years to come. As developing and emerging countries in Asia are witnessing an unprecedented uptick in infrastructure investment due to economic growth and their strategic location along major trade routes, national planning authorities have a central role to play to set strategic directions, plan and develop pipelines of infrastructure projects that contribute to building back better after the COVID-19 pandemic, and make sure green growth and climate goals are mainstreamed into the infrastructure investment cycle.

With financial support from the Government of Germany, the OECD **Sustainable Infrastructure Programme in Asia (SIPA)** aims to help Central and Southeast Asian countries ensure energy, transport and industry infrastructure investments are aligned with low-emission development pathways compatible with the Paris Agreement and the Sustainable Development Goals.

SIPA's activities target all stages of infrastructure development, from planning and design to financing and delivery. Its activities mainly involve six countries in Asia including three countries in Central Asia (Kazakhstan, Mongolia and Uzbekistan) and three countries in Southeast Asia (Indonesia, the Philippines and Thailand). The Programme's period of implementation is 2021 to 2025.

More information on SIPA at <https://www.oecd.org/site/sipa/>.