



Coal Phase-out and Gas Infrastructure Expansion 2030 Roadmap and Action Plan for Just Transition

Strategy to achieve Carbon Neutrality of the Republic of
Kazakhstan by 2060. **Focus on Karaganda region**

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18th session of the Group of Experts on Coal Mine Methane and Just Transition | UNECE



PARTNERSHIP FOR ACTION ON GREEN ECONOMY



PAGE Kazakhstan Timeline: 2019 - 2024

2020-2021 – Supported Low Carbon Development Strategy

2022 – Supported MNE in adapting the Carbon Neutrality Strategy (adopted Feb 23)

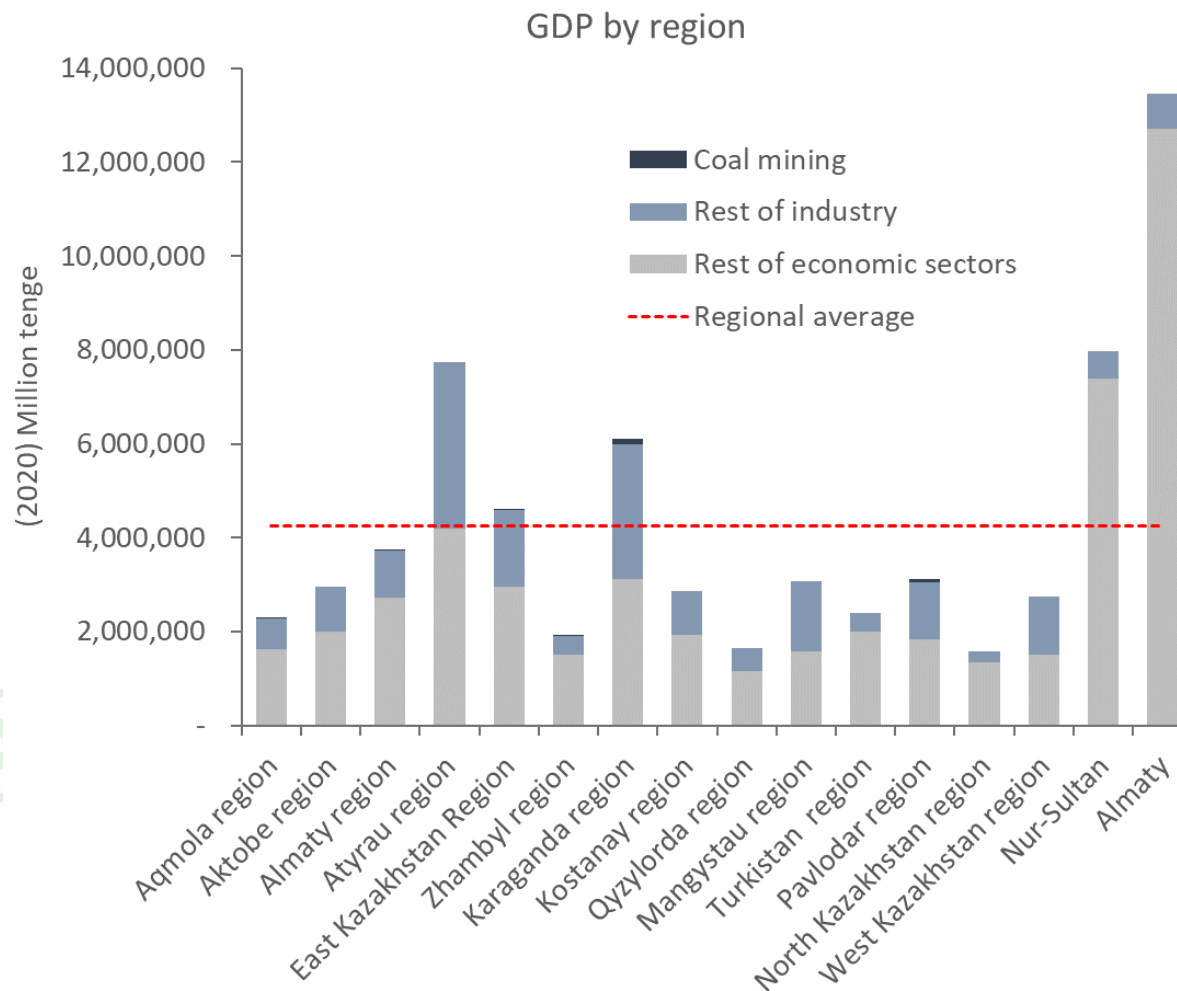
2022 – CBAM impact assessment for Kazakhstan

2022 – 2023 – Study on the social impact of the coal phase transition and technological alternatives (such as gasification, RE, etc.)

- Pilot project in Ekibastuz (Pavlodar region)
- Action plan development

KARAGANDA REGION: MACROECONOMY

2020 Coal Mining Contribution to GDP

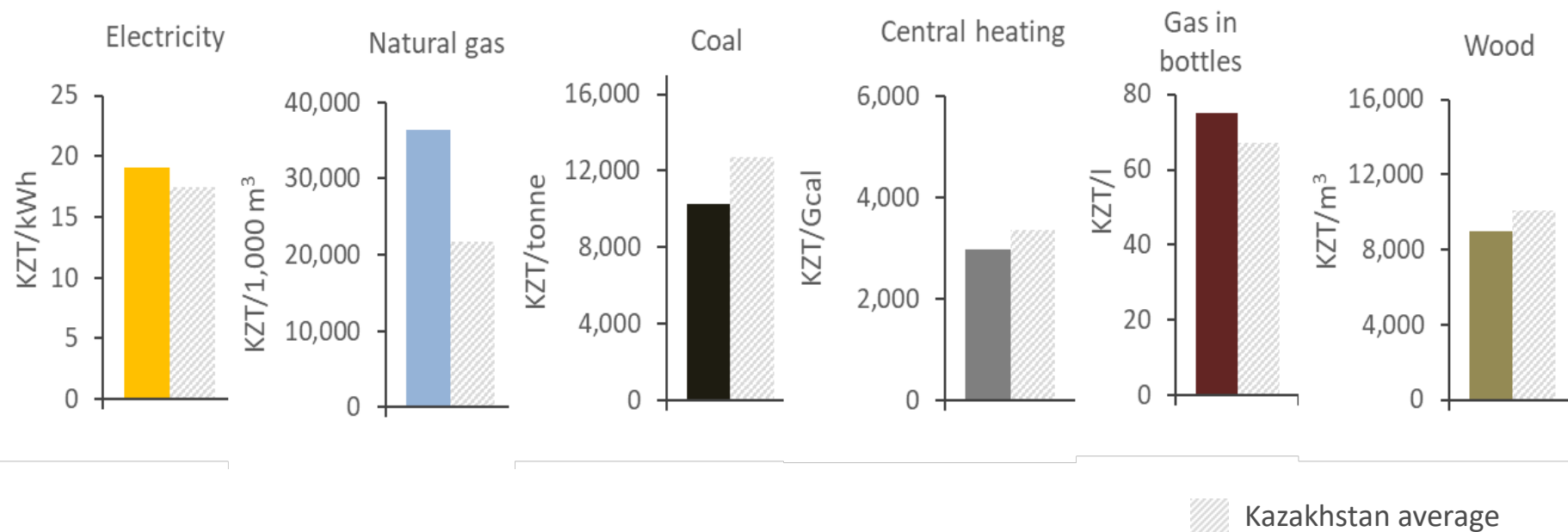


- Coal GDP contribution 1.7% for Karaganda
- Karaganda region has GDP higher than average
- GDP per capita is 4.43 Million (2020) higher than average

ENERGY TARIFFS FOR HOUSEHOLDS



2021 residential energy tariffs



- Lowest prices for coal and highest prices for the natural gas
 - Coal used in power and heat generation plants
- => Central heating at one of the lowest price in Kazakhstan

** Official energy tariffs including distribution price for a regular household from utilities (i.e., electric power, central heating, natural gas), as well as average prices for coal, propane and wood recorded in the region in 2021.*

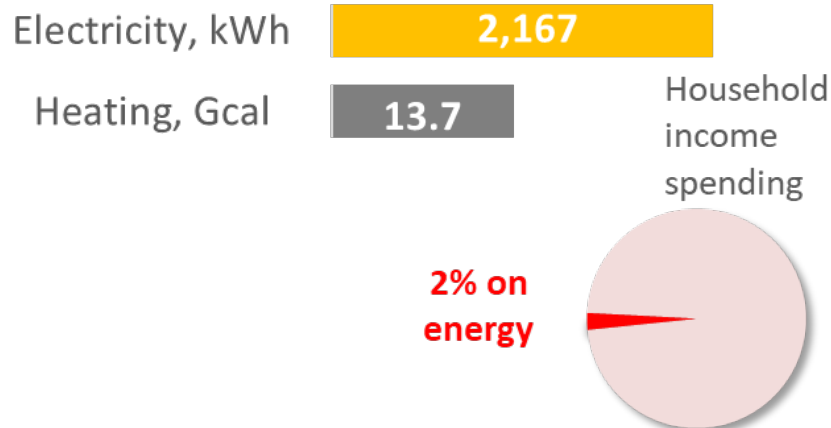


TYPICAL ENERGY CONSUMERS

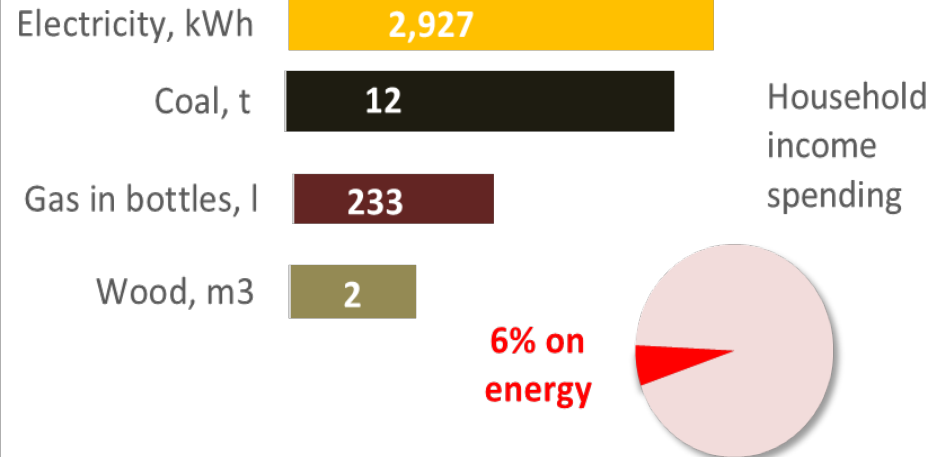


Average consumption per year

Typical urban household



Typical rural household



- Cities - multi-apartment buildings with central heating
- Rural areas - coal for heating and gas for cooking
- Energy burden in rural area is higher

**Based on data from the Bureau of National Statistics of Kazakhstan, Incomes and Energy expenses 2018-2021*



COAL-TO-GAS TRANSITION: KEY FINDINGS AND RISKS

Financial Losses and Gas Shortage Under Existing Regulation

- **National Gas Operator facing financial losses from the domestic market**
 - ✓ Around 550 billion TKZ (over 1 billion USD) per year till 2030

- **Risk of natural gas shortage in Kazakhstan due to:**
 - ✓ Low price of gas
 - ✓ Re-injection will double (i.e. 47% of all gas produced).





COAL-TO-GAS TRANSITION: KEY FINDINGS AND RISKS

Cost recovery for Energy Operators and Distributors

- Regional gas tariffs for households should be **more than two times higher**
- Average electricity tariff must be **9% higher** than the actual national tariff
- Average heating tariff must be almost **three times higher**

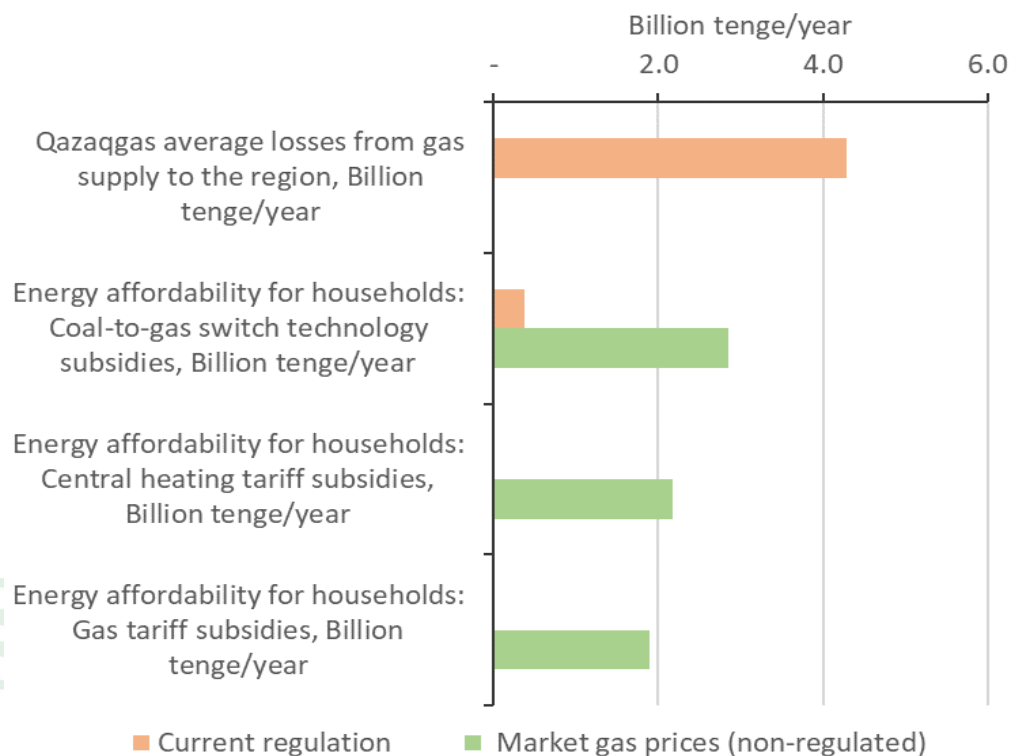
Planning Energy Affordability subsidies needed to **to support low-income families** to keep energy poverty under a 10% threshold*

* Households with energy burden about twice higher than the national median level are said to be experiencing energy poverty.

SUPPORT SUBSIDIES

For low-income households and gas operator

Economic impact under different tariffs regulations -
Karaganda region - Horizon 2023-2030⁽¹⁾



⁽¹⁾ All regional households are connected to gas (switched from coal) in 10 years (by 2033)

Households:

- Capital investments of households (mainly in rural regions)
- Energy affordability subsidies to households under market tariffs

Operators:

- Subsidies to counterbalance losses

* Switch from coal to gas (including utilities levels) before 2035; household capital investment is done for 10 years



BUILDING A TRANSITION COALITION



Transparent and efficient governance, monitoring, and communication

Stakeholders to be engaged:

- Federal and regional governments
- Coal mining and supporting companies
- Energy utilities and power generation companies
- Private companies (supportive of transition)
- Industrial associations (e.g., QazaqGreen)
- Unions, workers and communities representatives
- Consumers rights protection groups

Governance:

- Formal entity with specific mandate
- Independent from the existing governmental entities
- Measure and monitor progress and impact, lead engagement, consult stakeholders, identify & support opportunities, communicate at different levels



THANK YOU



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