

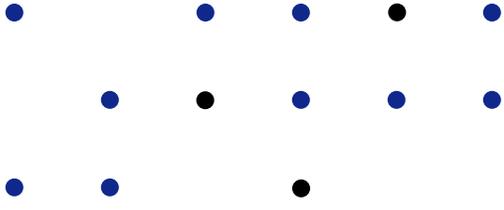


## Policy brief

# Fossil Fuel Subsidies in Kazakhstan and Options for Fiscal Measures to Stimulate Low-Carbon Development



**PAGE** PARTNERSHIP FOR ACTION ON GREEN ECONOMY



# Introduction

Subsidies for the production and consumption of fossil fuels have triggered excessive consumption of oil, gas, and coal. The combustion of fossil fuels results in GHG emissions exacerbating global climate change and air pollution, which, in turn, affects human health. Reforming fossil fuel subsidies is therefore reflected in the 2030 Agenda for Sustainable Development, adopted by the UN member states in 2015.

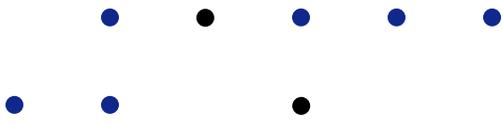
Sustainable Development Goal (SDG) No. 12 calls for the rationalization of inefficient fossil fuel subsidies. Global fossil fuel subsidies are estimated to be 3.5 times the funding needs to meet the SDGs related to basic social protection, health, and education (UNEP, 2019).

***Reforming fossil fuel subsidies would help achievement 6 of the 17 SDGs and free up significant financial resources for the attainment of other goals.***

The Government of the Republic of Kazakhstan has done significant work in adapting the global SDGs to the national context, and the first Voluntary National Review of Kazakhstan on the Implementation of the 2030 Agenda for Sustainable Development was presented in 2019. In recent years, Kazakhstan has also been reviewing and strengthening its climate policy. For example, at the Climate Ambition Summit held in December 2020, Kazakh President Kassym-Jomart Tokayev stated that the country is committed to becoming carbon-neutral by 2060.

***Achieving carbon neutrality is an ambitious task that will require reforming management of the energy sector and revising approaches to state support.***

This policy brief is based on the study "Fiscal Incentives for Low-Carbon Development of the Republic of Kazakhstan" conducted by experts of the International Institute for Sustainable Development within the Partnership for Action on Green Economy (PAGE), supported by the UN Environment Programme and in cooperation with the UN Development Programme.



## Direct and indirect subsidies for fossil fuel production and consumption in Kazakhstan

Over the examined period from 2016 to 2019, the total amount of fossil fuel subsidies in Kazakhstan in dollar terms increased by more than 50%, from about USD 6 billion (KZT 2 trillion) in 2016 to USD 9 billion (KZT 3 trillion) in 2019 (see Table 1).

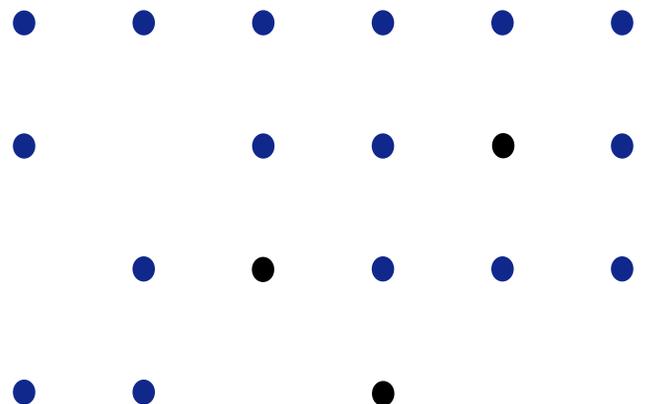
As in many other countries<sup>1</sup>, the majority of fossil fuel subsidies in Kazakhstan are provided not in the form of budget allocations, but in the form of price support (induced transfers) to consumers of oil and petroleum products, coal, gas, electricity and heat. These transfers are the result of regulation of tariffs and prices, which often do not reflect the full cost of energy production and transportation services.

*The total amount of induced transfers in 2019 amounted to USD 8.7 billion (KZT 3.3 trillion), while about USD 456 million (KZT 175 billion) was spent from the budgets of all levels to subsidize fossil fuels in the same year.*

## Budget spending on fossil fuel consumption and production subsidies

Budget funding for various fossil fuel subsidy programs in Kazakhstan has increased significantly from 2016 to 2019. Thus, in 2016, the total volume of subsidies from the national and local budgets amounted to USD 241 million (KZT 82.6 billion). This figure has almost doubled in four years (see Figure 1).

At the same time, spending on fossil fuel support (in dollar terms) from the national budget increased almost threefold, and the share of fossil fuel subsidies in total national budget expenditures increased from 0.5% to 1.1%.



**Table 1: Estimates of major fossil fuel subsidies in Kazakhstan, USD million**

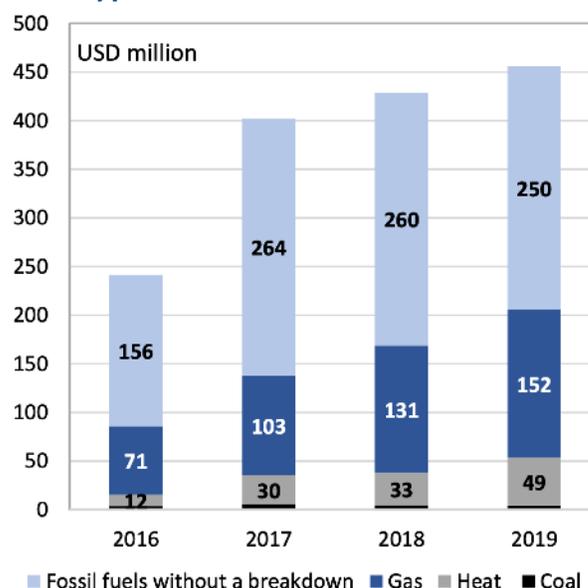
	2016	2017	2018	2019
<b>Budget expenditures, including:</b>	<b>241.4</b>	<b>401.8</b>	<b>428.8</b>	<b>455.9</b>
(-) subsidizing the cost of heat production	11.8	30.0	33.1	49.4
(+) development of gas transmission and heating infrastructure	226.4	366.7	391.3	402.6
(+) liquidation of the consequences of mines	3.2	5.1	4.3	3.9
<b>Tax revenue foregone, including:</b>				
Tax incentives under the mineral extraction tax	n.d.	n.d.	n.d.	n.d.
Excise tax credits	n.d.	n.d.	n.d.	n.d.
Tax incentives under the production sharing agreements (PSA)	n.d.	n.d.	n.d.	n.d.
Tax incentives for investment projects	n.d.	n.d.	n.d.	n.d.
<b>Induced transfers, including:</b>	<b>5759.7</b>	<b>8195.6</b>	<b>10746.2</b>	<b>8734.5</b>
rail transportation of coal	n.d.	n.d.	n.d.	n.d.
(+) oil consumption***, including:	3046.0	4670.1	5889.9	5185.3
(-) opportunity cost for the KazMunayGas	799.0	1530.5	2255.5	1997.9
(+) heat consumption, including:	79.6	32.6	93.1	30.6
(-) subsidized heat production by the Samruk-Energo	4.7	1.9	5.6	1.7
(+) coal consumption*	1740.1	2376.3	2817.6	2249.4
(+) power consumption*	630.1	787.3	1373.7	963.8
(+) natural gas consumption*	<b>264.0</b>	<b>329.3</b>	<b>571.9</b>	<b>305.4</b>
<b>Total**</b>	<b>5989.2</b>	<b>8567.5</b>	<b>11141.8</b>	<b>9141.0</b>

Source: prepared by the authors. ; Notes: n. d. - no data. ; \*IEA estimate (IEA, 2020) ; \*\* budget transfers to partially cover heat production costs are excluded to avoid double counting. ; \*\*\* The estimate of oil consumption subsidies derived in this study (based on national data) is substantially higher than the IEA estimate, but is more precise.

During the 2016-2019 study period, about USD 1.5 billion (KZT 536 billion) was allocated from the consolidated budget and the National Fund to support the production and consumption of fossil fuels.

Figure 1 shows the breakdown of budget subsidies by fuel type. The smallest amount of funds (about USD3-4 million per year) was allocated to support the coal sector.

**Figure 1. Budget fossil fuels subsidies by fuel type**



Source: prepared by the authors based on the data of the Ministry of Finance of the RK (2020, 2021), Parliament of the RK (2018), Ministry of Energy of the RK (2018), Ministry of Industry and Infrastructure Development of the RK (2018).

Budgetary subsidies for heating services for households increased almost fourfold to USD 49.4 million (KZT 19 billion) over the 2016-2019 period. Budget spending on the construction of the 100 gas transportation infrastructure more than doubled. Besides, two budget programs envision the development of both gas transportation infrastructure and heating and power sector, so that it is not possible to breakdown expenditures by type of energy resource.

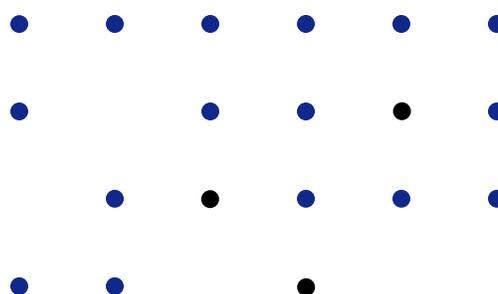
### Tax benefits stimulating extraction and use of fossil fuels

The tax legislation of Kazakhstan provides for a number of benefits both for specific taxes in the area of subsoil use, and within the framework of tax privileges available to companies investing in the development of priority sectors of the economy. However, estimates of tax expenditures (tax revenue foregone) due to benefits provided are not available.

Key identified tax benefits available to subsoil users for the production of coal, oil and gas, producers of petroleum products, as well as energy producers:

- a 0.5 decreasing coefficient to the mineral extraction tax (MET) rate on oil sales for the needs of the domestic market;

- 0.01 decreasing coefficient to the MET rate for coal, lignite and oil shale;
- zero mineral extraction tax rate when extracting coal from the off-balance reserves;
- reduced MET rates on sales of crude gas for domestic market needs;
- zero excise tax rate on crude oil and gas condensate produced in Kazakhstan or imported;
- excise tax exemption for producers of gasoline (excluding jet fuel) and diesel fuel for exports for the period from March 27 to December 31, 2020;
- tax incentives within the framework of production sharing agreements;
- tax incentives for investment projects in the power, gas, steam and air conditioning: exemption from customs duties and VAT on imports, state in-kind grants;
- tax incentives for priority investment projects in the areas of coal preparation, coke production and refined petroleum products: exemption from customs duties and VAT on imports, state in-kind grants, 100% reduction in corporate income tax, exemption from land tax and property tax.



## Indirect subsidies for consumers of fossil fuels

According to the International Energy Agency (IEA), Kazakhstan has one of the highest rates of energy prices subsidisation among the post-Soviet countries (IEA, 2020a).

*End consumers in Kazakhstan, on average, pay only 55% of the market price of energy resources (IEA, 2020a).*

Thus, the total amount of induced transfers in 2019 reached KZT 3.3 trillion, about 60% of this amount constitute subsidies for oil consumption and 26% for coal consumption.

## Induced transfers in the sector of oil

The Government of Kazakhstan obliges oil producers to supply part of their oil to meet the needs of the domestic market, which is stipulated by the Law "On State Regulation of Production and Turnover of Certain Types of Petroleum

Products" (Parliament of Kazakhstan, 2011). At the same time, regulated oil prices at the domestic market are set significantly below the market levels, i.e., prices in the international market. Indirect subsidies to consumers due to regulated prices is an opportunity cost for oil-producing companies. For companies, this is actually a lost revenue, part of which would have been redirected to the state budget in the form of paid taxes.

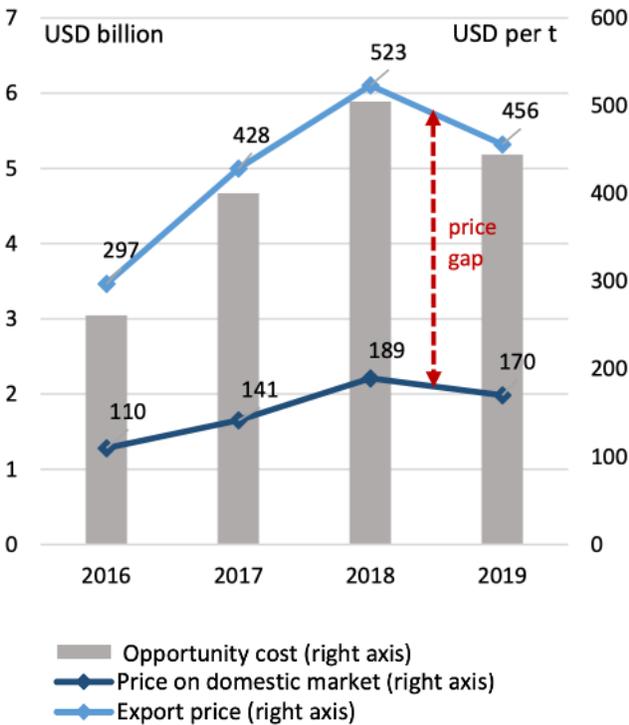
At the level of the country as a whole, the opportunity cost for oil producing companies is calculated using the price gap method based on data on oil consumption at the domestic market, as well as prices of oil producing enterprises for export and for the domestic market (Bureau of National Statistics of the RK, 2020, 2021).

Figure 2. clearly illustrates the application of the price gap method. The export price is more than twice the price of oil sales at the domestic market of Kazakhstan, which explains quite high estimates of the opportunity cost.

*Indirect subsidies to consumers of petroleum products in 2018-2019 amounted to about USD 5- 6 billion (KZT 2 trillion annually).*

This estimate differs considerably from the IEA's estimate of about USD 3 billion in current prices (1.2 trillion KZT in 2019) due to use of different input data.

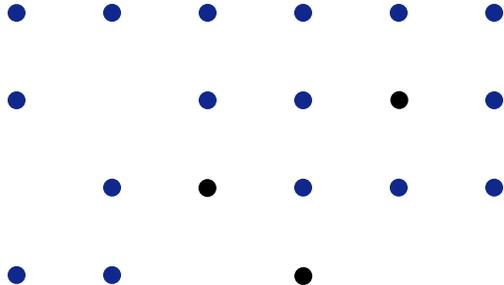
**Figure 2. Estimate of the opportunity cost for oil producers in Kazakhstan**



Source: prepared by the authors based on the data from the Bureau of National Statistics of the Republic of Kazakhstan (2020, 2021)

## Induced transfers in the rail freight sector

The rail freight sector in Kazakhstan is highly regulated, although in recent years the government has taken some steps towards gradual liberalization of the market (KTZh, 2019). The policy of containing rail tariffs has actually led to a complex system of cross-subsidization. According to KTZh's annual report (2019), about 78% of freight was transported by the company at below-cost tariffs due to deficiencies in tariff regulation. However, it turned to be impossible to estimate the amount of subsidies for coal transportation by the KTZh at low tariffs due to limited access to the necessary data. Information on the cost of transportation as well as the structure of KTZh's freight transportation is not subject to disclosure.



## Induced transfers in electricity and heat sector

According to the Law "On Electricity" of the RK, the marginal sale tariffs for electricity generation are approved by the Ministry of Energy of RK for a period of 7 years. The legislation provides for inclusion of production costs, purchase of electric power from the Financial Center for the Renewable Energy Support and fixed profit. Thus, marginal tariffs should take into account expenses for fuel and other materials, labour remuneration, repair, depreciation, taxes, etc. In practice, however, deficit tariffs may be approved that do not provide for profitability and annual indexation, as noted in the annual report of the Samruk-Energo (2020).

Thus, according to the CRNM (2021), a number of energy-producing organizations sold electricity at tariffs at or below cost recovery during 2016-2019 period. In addition, it should be noted that a number of tax and other state measures allow to artificially underestimate the cost of electricity production.

Heat energy supply belongs to the area of natural monopolies, so the marginal tariffs for producers are established by the Committee on Regulation of Natural Monopolies (CRNM) of the Ministry of National Economy of the RK (Parliament of the RK, 2018). Tariffs are approved for a long-term period (at least 5 years), but annual indexation of costs is envisioned. Thus, tariffs for heat production take into account material costs, labour remuneration, repair work, depreciation, etc. Tariffs could be reviewed once a year, but can be kept unchanged even in case of cost increase for objective reasons.

According to Article 15 of the Law "On Natural Monopolies," the tariff must ensure the reimbursement of costs and profits, but this principle is not always applied in reality.

Figure 3 shows that the cost of heat generation exceeded the weighted average tariff for TPPs and CHPPs of the JSC Samruk-Energo during the examined period. In 2016 and 2018, this gap was the largest and amounted to about 11% and 9%, respectively.

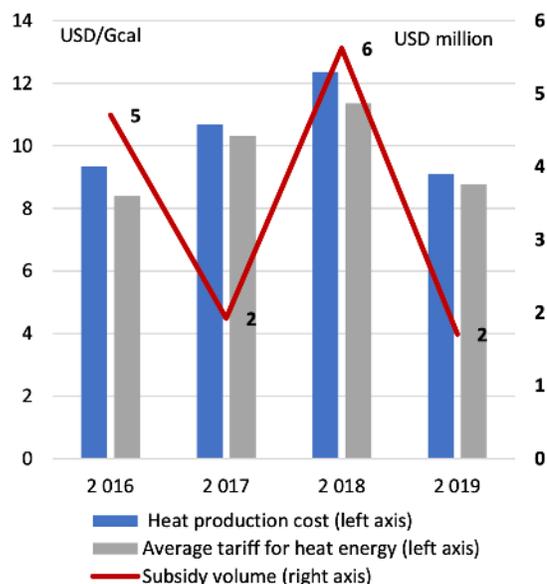
Provision of heat supply services at a tariff lower than the production cost is an indirect subsidy to consumers at the expense of the energy producing

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Taking a rough assumption that heat subsidies provided by other energy producing organizations are, on average, comparable to the estimate for the JSC Samruk-Energo, we obtained an indicative estimate of heat consumption subsidies in the country as a whole at USD 31 to USD 80 million (11 to 32 billion KZT) per year for the period 2016-2019.

For example, about USD 456 million (KZT 175 billion) was allocated from budgets of all levels to subsidize consumption and production of fossil fuels in 2019 and for programs promoting low-carbon development - only USD 1.7 million (KZT 640 million).

**Figure 3. Heat production subsidization by the JSC Samruk-Energo**



Source: prepared by the authors based on the data from Samruk-Kazyna (2021).

## Fiscal incentives for low-carbon development of Kazakhstan

*Budget spending on fossil fuels subsidies is several times greater than spending on budget programs to directly or indirectly improve energy efficiency and reduce greenhouse gas (GHG) emissions.*

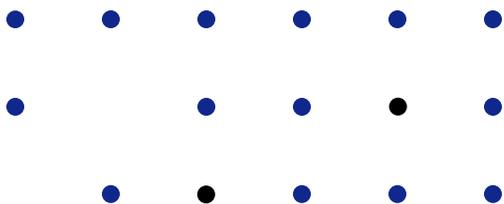
For example, about USD 456 million (KZT 175 billion) was allocated from budgets of all levels to subsidize consumption and production of fossil fuels in 2019 and for programs promoting low-carbon development - only USD 1.7 million (KZT 640 million).

Table 2 shows all identified budget programs supporting energy efficiency and GHG reduction for the 2016-2019 period, which were primarily of informational and educational character. Over examined period from 2016 to 2019, no budget programs were identified that supported capital expenditures for residential energy efficiency improvements. However, according to the Kaz-Center ZhKH (2021), funding of capital repairs of multi-apartment buildings (MABs) to improve the energy efficiency of buildings and restore performance characteristics was provided from the national budget under the Regional Development Program to 2020 from 2011 to 2015 (Government of the RK, 2014).

A positive signal is the resumption of the state funding for the capital repairs of MABs from 2020. At the end of December 2019, the "Nurly Zher" housing and communal development program for 2020-2025 was adopted, among the tasks of which is the repairment of MABs and renovation of the housing stock. To accomplish this task, about USD 22.5 million (KZT 8.6 billion) were envisioned for this purpose in the 2020 republican budget for the repairment of 249 houses in 8 regions (Kaz-Center ZhKH, 2021).

In addition, renewable energy producers can also take advantage of tax incentives available for investment projects and provided for in special economic zones (SEZ). However, estimates of tax expenditures (tax revenue foregone) due to the benefits provided are not available.

*It is estimated that the total amount of subsidies provided by the JSC Samruk-Energo to heat consumers for the period 2016 -2019 was more than USD 14 million (KZT 4.8 billion).*



## Options to increase the fiscal space

Given the huge amount of direct and indirect subsidies for the production and consumption of fossil fuels in Kazakhstan, reforming these mechanisms of state support should be considered in a first place.

*Gradual phase-out of budgetary subsidies on partial compensation of costs to energy producers to purchase fuel and carry out repairs to secure heat supply will result in the annual savings of up to USD 49 million (19 billion KZT).*

At a later stage, consideration should be given to the possibility of taking into account the costs of development and modernization of heating and gas

supply infrastructure in the structure of tariffs (possibly through special surcharges) for the provision of energy services to households.

*This step will additionally free up about USD 403 million (154 billion KZT) from the national and local budgets annually.*

Careful evaluation of the effectiveness of all available tax benefits and rationalization of tax expenditures, primarily excise and mineral extraction tax benefits, will increase revenues to the national and local budgets. Moreover, an increase in tax revenues can also be achieved as a result of gradual liberalization of energy prices. Gradual increase of domestic prices close to market levels will ensure an increase in revenues from MET,

**Table 2. Budgetary expenditures to support energy efficiency and GHG emission reduction, USD thousand**

Budget program	Budget	2016	2017	2018	2019	Total for the period
Energy audits of the multi-apartment buildings	local	273.3	113.0	121.9	29.1	<b>537.4</b>
Reducing greenhouse gas emissions	republican	401.6	420.7	154.0	345.2	<b>1321.5</b>
Ensuring energy efficiency improvements in economic sectors	republican	1230.9	1308.8	1109.7	996.0	<b>4645.4</b>
Carrying out energy saving activities in the social facilities and housing and communal services as part of the Regional Development Program to 2020	republican	n. d.	438.1	435.1	302.2	<b>1175.5</b>
<b>Total</b>		<b>1905.8</b>	<b>2280.6</b>	<b>1820.8</b>	<b>1672.6</b>	<b>7679.8</b>

Source: prepared by the authors based on data from the Ministry of Finance of the RK (2020, 2021), Ministry of Energy of the RK (2018), Ministry of Industry and Infrastructure Development of the RK (2020a, 2020b), Parliament of the RK (2016).

corporate income tax and other taxes from energy producers, and from consumers - from VAT and excise duties.

The accumulation of additional funds to finance low-carbon development is possible through the use of carbon pricing instruments, such as an emissions trading system and/or a carbon tax. Although Kazakhstan's National GHG Emissions Trading System (KZ ETS) was launched back in 2013, the initial allocation of allowances was done on a free basis (Zhasyl Damu, 2020). Gradually increasing the share of quotas for auctioning in the subsequent phases of KZ ETS will allow accumulating additional funds that can be used to finance GHG emission reduction projects.

The introduction of a carbon tax as a minimum price for CO<sub>2</sub> emissions could be implemented as a complimentary to the existing ETS of Kazakhstan. Expanding the pricing base for CO<sub>2</sub> emissions to include those sectors that are currently not

covered would generate additional revenue for the budget, as well as provide a stable price signal for energy consumers and thus reduce emissions in the long term.

### **Budgetary spending options to stimulate low-carbon development**

It should be noted that the implementation of the above proposed reforms will lead to an increase in energy prices and tariffs in the domestic market of Kazakhstan, bringing them closer to the level of international prices. However, the implementation of these measures should be carried out step-wise, allowing sufficient time for the businesses and households to adapt (for example, by scheduling the reform for 10 years). In addition, most of the accumulated funds will need to be redirected to carefully targeted assistance for low-income groups particularly vulnerable to higher energy prices. Even if the government of Kazakhstan will have to spend more than 50% of the accumulated funds on targeted subsidies for the households,

some funds will be left to stimulate the transition to a low-carbon development. Over time, budget spending on targeted subsidies for low-income households will decrease due to rising household incomes, as well as reduced energy consumption in the residential sector as a result of the introduction of large-scale thermo-modernization programs for buildings.

Given Kazakhstan's priorities on the improvement of energy efficiency, as well as increasing the share of renewable energy in the structure of power generation, funding of state programs on energy efficiency retrofits of buildings, as well as support for the use of renewable energy technologies by households, could be used as the basis of a "green" economic recovery of Kazakhstan.

A significant increase in budget funding of energy efficiency retrofits of buildings will reduce energy consumption in the housing sector by up to 30% and, accordingly, reduce GHG emissions. In addition, public investments in the buildings sector will stimulate the growth of the construction sector and related

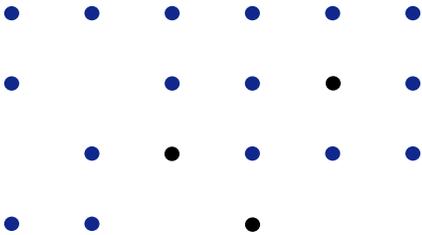
industries, as well as the establishment of new jobs. The IEA estimates that investment in the buildings sector, particularly in energy efficiency retrofits, has one of the greatest potential for creating new jobs (IEA, 2020b).

Budget funding of energy efficiency retrofits can be carried out in the form of partial or full (in the case of public institutions) financing of capital costs or providing a loan on terms attractive enough for borrowers or both approaches can be used.

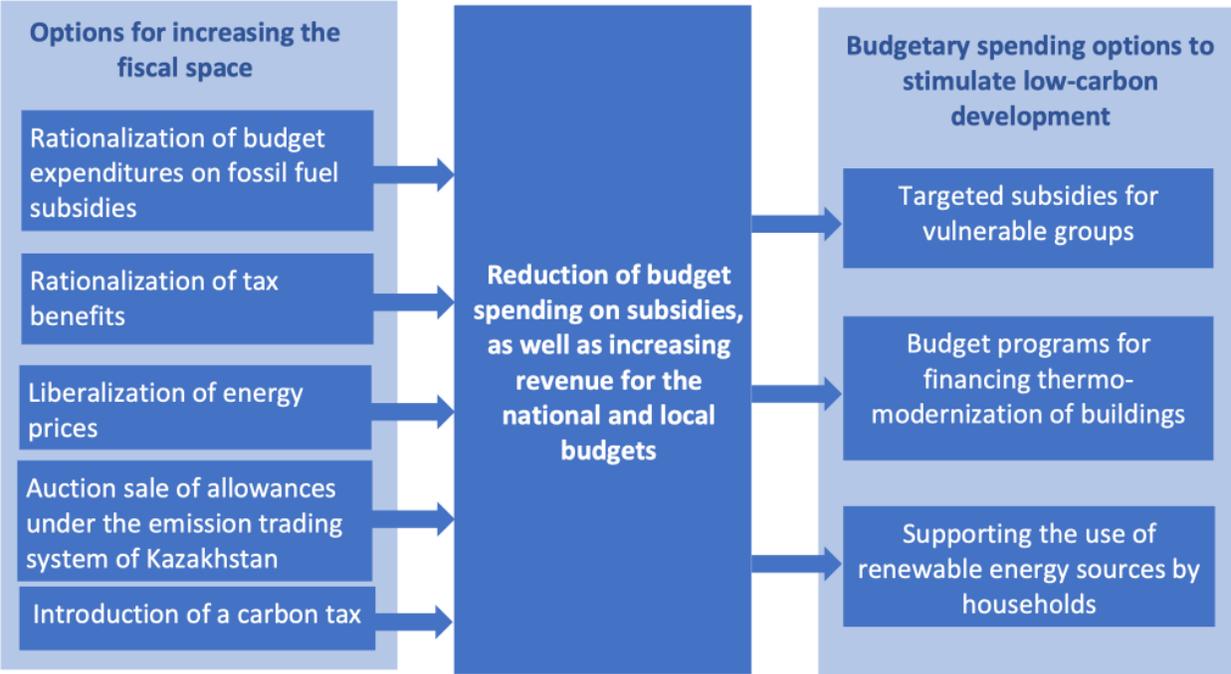
Based on the experience of many countries, including China, the state program on energy efficiency retrofits of buildings can be focused on the priority thermo-modernization of public institutions, in particular - hospitals, kindergartens and schools, buildings of state bodies. Taking into account the fact that the energy supply of these facilities is financed directly from the budgets of different levels, thermo-modernization of these buildings will allow achieving significant savings of public funds.

In addition, more effective mechanisms should be developed to support the use of the renewable energy sources by households, since the existing mechanisms do not work effectively enough. State support could be provided either in the form of compensation for part of the capital costs for installing solar panels, solar collectors, mini-wind generators, heat pumps, or allowing households to sell excess electricity at incentive tariffs.

Figure 4 schematically shows a possible approach for increasing fiscal space to finance state programs of large-scale thermo-modernization of buildings, support the use of RES at the household level, as well as targeted subsidies for vulnerable groups.



**Figure 4: Fiscal incentives for low-carbon development**



Source: prepared by the authors

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