



**Guidelines and best practices for micro-, small and medium enterprises
in the Kyrgyz Republic on delivering energy-efficient products and in
providing renewable energy equipment**

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Table of contents

<i>Acknowledgments</i>	2
<i>Abbreviations</i>	5
<i>List of tables</i>	6
<i>List of figures</i>	6
<i>Executive summary</i>	7
<i>Introduction</i>	9
<i>1. Analysis of the environment in which MSMEs operate in the field of energy efficient products, services and equipment for renewable energy sources in Kyrgyzstan, which they face as a result of the Covid-19 crisis</i>	10
1.1 <i>Definition of MSMEs in the Kyrgyz Republic</i>	10
1.2 <i>Methodology</i>	10
1.3 <i>Chronology of the crisis in the Kyrgyz Republic</i>	11
1.3. <i>The overall impact of the COVID-19 crisis on the economy of the Kyrgyz Republic</i>	13
1.4 <i>Impact of the COVID-19 crisis on MSMEs in the Kyrgyz Republic</i>	16
1.5 <i>Measures taken by the Government of the Kyrgyz Republic in response to the challenges of the pandemic</i>	18
1.6 <i>Interviewed MSMEs in the field of energy efficiency and renewable energy sources in the Kyrgyz Republic and the impact of the crisis</i>	21
1.6 <i>Response of MSMEs in the field of energy efficiency and renewable energy in the Kyrgyz Republic to the COVID-19 crisis</i>	24
1.6.1 <i>Employment</i>	24
1.6.2 <i>Supply chain</i>	27
1.6.3. <i>Financial liabilities of MSMEs</i>	28
1.6.4. <i>Movable and immovable property of MSMEs</i>	28
1.6.5. <i>Support of MSMEs from the state and international organizations</i>	28
1.6.6. <i>Necessary measures to support MSMEs from the state and international organizations</i>	28
<i>2. Renewable energy and energy efficiency best practices relevant to MSMEs response to Covid-19 crisis and post-crisis recovery in Kyrgyzstan</i>	31
2.1. <i>Development and promotion of solar dryers (Center for RE and EE development)</i>	31
2.2. <i>Development of a new hydraulic ram pump (IE Rogozin)</i>	32
2.3. <i>Expansion in RES sector (Delta-TEK)</i>	33
2.4. <i>An effective business model for selling heat instead of heat pumps (Trikona LLC)</i>	33
2.5 <i>Using financial and consultancy assistance for the construction of biogas plant (IE Zhorojev/Fluid)</i>	34
2.6. <i>Heat pump and solar water heating system for the “Monarch” health center</i>	36

2.7. Temporary transition to another sphere of activity of individual entrepreneurs in Osh, Talas and Naryn regions of the Kyrgyz Republic	36
4. <i>Practical measures, opportunities and recommendations for MSMEs supplying energy efficient products and providing renewable energy equipment on access to finance, markets and advanced technologies in the Kyrgyz Republic.</i>	<i>37</i>
5. <i>Guidelines for MSMEs delivering energy efficient products and providing renewable energy equipment on access to finance, markets and advanced technologies in Kyrgyzstan</i>	<i>43</i>
6. <i>Recommendations to the Cabinet of Ministers of the Kyrgyz Republic on creation of an enabling environment through appropriate policies and legislation for MSME to stimulate delivery of energy efficient products and services and provision of renewable energy equipment</i>	<i>45</i>
References	47
<i>Annex I. Questionnaire on the impact of COVID-19 on micro, small and medium sized enterprises in Kyrgyzstan in the supply of energy efficient products and provision of equipment for renewable energy sources.....</i>	<i>49</i>
<i>Annex 2. The list of services subject to digitalization, according to the respondents of the ACC KR survey.....</i>	<i>53</i>

Abbreviations

ACC	American Chamber of Commerce (AmCham)
ADB	Asian Development Bank
AUCA	American University of Central Asia
ASB	Assistance to Small Business Development Group
CIPE	Center for International Private Enterprise
CJSC	Closed Joint Stock Companies
EE	Energy Efficiency
EBRD	European Bank of Reconstruction and Development
EAEU	Eurasian Economic Union
ES/SE	Emergency situation/State of emergency
ESCO	Energy service company
HS	Harmonized System
HMF	Housing Microfinance
IE	Individual Entrepreneurs
IFC	International Financial Corporation
JSC	Joint Stock Companies
KyrSEFF	Kyrgyz Sustainable Energy Financing Facility
MoEF	Ministry of Economy and Finance of the Kyrgyz Republic
MSME	Micro-, small and medium enterprises
MFO	Micro financing organizations
NBKR	National Bank of the Kyrgyz Republic
NSC	National Statistical Committee of the Kyrgyz Republic
NBKR	National Bank of Kyrgyz Republic
PIP	Public Investment Program
PRC	People's Republic of China
R&D	Research and Development
RES	Renewable Energy Sources
RKDF	Russian-Kyrgyz Development Fund

List of tables

Table 1 Structure of GDP by type of economic activity in current prices	13
Table 2 Structure of employment of the population of the Kyrgyz Republic in 2019 and 2020	15
Table 3 Number of employed and rate of employment in Kyrgyz Republic MSMEs in 2019	17
Table 4 Government policy responses to the COVID-19 crisis.....	18
Table 5 Quotes of MSME on products and services that had to be suspended	26
Table 6 Financing of business entities” Programme participation conditions.....	38

List of figures

Figure 1 Detected new cases of COVID-19 in the Kyrgyz Republic	12
Figure 2 Distribution of MSMEs by size and location.....	21
Figure 3 Distribution of surveyed MSMEs by legal form.....	22
Figure 4 Distribution of surveyed MSMEs by field of activity and location	22
Figure 5 Distribution of MSMEs in the field of renewable energy by technology and location	23
Figure 6 Distribution of MSMEs in the field of energy efficiency by technology and location.....	23
Figure 7 Distribution of MSMEs by type of service and location	24
Figure 8 Changes in employment of MSMEs in the field of RES and EE	25
Figure 9 Social networks used by MSMEs.....	26
Figure 10 Impact of the pandemic on the supply of materials and equipment	27
Figure 11 Solar dryers	31
Figure 12 Improved hydraulic ram pump of Rogozin.....	32
Figure 13 Photovoltaic system with power of 3 kW in Novopavlovka village, Chui region of the Kyrgyz Republic.....	33
Figure 14 Smart glasses, illustrative photo	34
Figure 15 Biogas plant of IE Zhorojev and cafe Texas, where biogas is used	35
Figure 16 Wellness Center "Monarch" and installed solar system.....	36

Executive summary

In the post-COVID-19 recovery period, micro-, small and medium enterprises (MSMEs) providing energy-efficient and renewable energy products and equipment can play an important role in the transition of the Kyrgyz Republic to a green economy if they are provided with the necessary incentives.

To overcome the crisis, existing and new MSMEs can benefit from clear guidelines on access to finance, access to markets, access to advanced technologies and the enabling environment created by effective public policies and measures. MSMEs can also benefit from real life examples of other enterprises dealing with the crisis in energy efficiency and renewable energy, including recovery.

In Phase 1 of the “Global Initiative to Revive the MSME Sector after COVID-19” project, UNECE developed Guidelines and Best Practices for Micro-, Small and Medium Enterprises in Delivering Energy-Efficient Products and in Providing Renewable Energy Equipment¹. The publication provides examples of best practices in the energy efficiency and renewable energy sectors relevant to MSMEs in response to the COVID-19 crisis and post-crisis recovery, as well as case studies of practical measures for MSMEs on market access, finance and advanced technologies. It also provides guidance to governments on the development of policy guidelines and financial incentive schemes. Countries in the UNECE region can benefit from the customization of the Guidelines and best practices. The Kyrgyz Republic is one of the pilot countries for adapting developed recommendations, which takes into account the country's specific conditions.

This study includes an analysis of the environment in Kyrgyzstan that MSMEs face as a result of the COVID-19 crisis; best practices in energy efficiency (EE) and renewable energy sources (RES), introduced in the Kyrgyz Republic, demonstrating how MSMEs can respond to current challenges; measures that MSMEs can take to restore confidence in the business; and recommendations to the Cabinet of Ministers of the Kyrgyz Republic on creating favorable conditions for MSMEs for a smoother and more efficient economic recovery in accordance with the principles of sustainable development.

In the Kyrgyz Republic, the government took drastic measures such as isolation, quarantine and travel restrictions even before the onset of a serious health crisis, which greatly affected the business environment. Most MSMEs have been affected by restrictive measures and have tried to maintain their operations in the face of uncertainty, a strong decline in demand and supply problems. The crisis was aggravated by the political instability caused by the elections to the Jogorku Kenesh (the Parliament) of the Kyrgyz Republic, and resulted in a change of power and a complete overhaul of the foundations of public administration and state structures, which lasted until mid-2021, aggravated by the second and third waves of mass COVID-19 infections in the fall of 2020 and in the summer of 2021.

MSMEs responded to the initial restrictive measures by forced cuts in production and provision of services, switching to remote work from home. All MSMEs faced a decrease in demand for their services and a corresponding decrease in income, on average by 50%.

To deal with the pandemic, the Government has presented an anti-crisis plan aimed at supporting citizens and the business sector, aimed at supporting economic stability during the pandemic and helping to recover. These measures included the extension of reporting deadlines, eliminating penalties for non-payment of taxes, the postponement of taxes and insurance premiums, suspension of inspections by state regulatory agencies, as well as recommendations to banks to postpone the payment of interest on existing loans.

An important point of the Plan was the creation of an Anti-Crisis Fund in the amount of 14 billion KGS (around 165 million USD²) for concessional lending to business entities. Concessional lending to small and

¹ Accessible at <https://unece.org/info/Sustainable-Energy/pub/351153>

² At exchange rate of 84.9 KGS per USD

medium-sized businesses was carried out subject to the introduction of automated systems for transparent accounting and reporting of business activities (cash registers with online data transfer function, electronic tax procedure systems). Concessional lending was also implemented for the production sector in for export-oriented and directed at import substitution manufacturers, as well as for regional projects, including those supporting regionally significant business clusters.

However, as shown by a survey among MSMEs, such support was not received by enterprises from the RES and EE sector. The most widely used initiative by MSMEs interviewed was the use of deferral of loan payments.

Based on the results of the study, a number of recommendations were developed for the Cabinet of Ministers of the Kyrgyz Republic and MSMEs working in the energy efficiency and renewable energy sectors, which should increase their ability to overcome the crisis and contribute to a quick recovery.

Introduction

Micro-, small and medium enterprises (MSMEs) in the provision of energy-efficient products and equipment for renewable energy could play a critical role in the Green recovery phase from the crisis, caused by COVID-19 pandemic. However, they have to be provided with the necessary incentives for restarting, or even creating new enterprises, in the face of limited employment opportunities.

Such MSMEs can benefit from clear guidance on access to finance, markets, advanced technology and the creation of an enabling environment for their development with appropriate government policies and legislation. Specific examples of the successful implementation of measures that have been taken by other MSMEs in the sector, including re-profiling, which, in some cases, has led to temporary economic benefits, could also be successfully replicated.

The United Nations Economic Commission for Europe (UNECE) is one of the partners implementing the UN Development Account project “Global Initiative for the Recovery of MSME Sector after COVID-19”. The overall objective of the project is to strengthen the capacity and sustainability of micro, small and medium-sized enterprises (MSMEs) in developing countries and countries with economies in transition to mitigate the economic and social impact of the global COVID-19 crisis. As part of this project, UNECE has developed guidelines and collected best practices for MSMEs in delivering energy efficient products and in providing renewable energy equipment in the aftermath of the COVID-19 crisis.

The Kyrgyz Republic is one of the pilot countries for customization of these Guidelines, which would take into account the specific conditions of the country. This study includes an analysis of the environment that MSMEs face as a result of the COVID-19 crisis in Kyrgyzstan; best practices in energy efficiency (EE) and renewable energy sources (RES), introduced in Kyrgyzstan, which show how MSMEs can respond to current problems or similar problems in the future; measures that MSMEs in Kyrgyzstan can take to restore confidence in business; and recommendations to the Cabinet of Ministers of Kyrgyzstan to create an enabling environment for MSMEs conducive to economic recovery consistent with sustainable development goals.

The severe health crisis caused by COVID-19 has forced governments around the world to take drastic measures such as administrative closures of businesses, quarantines, and restrictions on mobility and social contacts to contain the spread of the virus, leading to a stagnant global economy. Businesses are experiencing a downturn in earnings, and financial liabilities to suppliers, employees, creditors and investors are depleting firms' liquidity reserves.

1. Analysis of the environment in which MSMEs operate in the field of energy efficient products, services and equipment for renewable energy sources in Kyrgyzstan, which they face as a result of the Covid-19 crisis

1.1 Definition of MSMEs in the Kyrgyz Republic

According to one of the classification schemes adopted in the Kyrgyz Republic, small and medium-sized enterprises are legal entities, commercial enterprises with a number for workers in industry and production: up to 15 people - micro-enterprises, as a subclass of small enterprises, up to 50 people - small enterprises and from 51 to 200 people - medium-sized enterprises, and for trade and services: up to 7 people - micro-enterprises, up to 15 people - small enterprises and from 16 to 50 people - medium-sized enterprises.

The second scheme assumes classification in accordance with the volume of turnover, for industry and production: up to 150 thousand soms - micro-enterprises, up to 500 thousand soms - small enterprises, and up to 2 million soms - medium-sized enterprises, and for trade and services: up to 230 thousand soms - micro-enterprises, up to 500 thousand soms - small enterprises, and up to 2 million soms - medium-sized enterprises. In addition, it would be appropriate to consider individual entrepreneurs who, working alone or with employees, are counted by the National Statistical Committee as a separate category, along with small and medium-sized enterprises, but, in fact, are representatives of MSMEs.

1.2. Methodology

The overall objective of the study is to develop a quick assessment of the status of MSMEs in the Kyrgyz Republic, the status of the potential of companies for investments in energy efficiency (EE) and renewable energy sources (RES) in their business, as well as to provide recommendations for improving the investment climate in these technologies during the crisis and recovery period. In this context, a better understanding of the company's energy efficiency investment decisions and renewable energy measures and their key determinants are needed to develop appropriate policies and actions to help and support the growth of the EE and RES sectors.

The methodology used in this study includes the following tools and approaches:

- The collection of primary data was carried out using the survey “Analysis of the impact of the COVID-19 pandemic on micro, small and medium-sized enterprises operating in the RES and energy efficiency sector”. The survey was conducted from 12 July 2021 to 30 August 2021 in a month and a half, using an online questionnaire distributed to companies in the industry and other parties interested in energy efficiency and renewable energy initiatives, as well as through telephone interviews. The list of such companies was compiled in accordance with information received from the Center for the Development of RES and Energy Efficiency in the Kyrgyz Republic, the Renewable Energy Association in the Kyrgyz Republic, as well as an open list of approved suppliers of the Kyrgyz Sustainable Energy Financing Facility (KyrSEFF) Program³.
- The survey was conducted to assess the impact of the pandemic on income, employment, production, supply chain, assess administrative and technical measures taken by MSMEs for adaptation, as well as to assess the support received from the Government or other sources, and to collect MSMEs recommendations for the Cabinet of Ministers of the Kyrgyz Republic on necessary support measures. The questionnaire used for the study is given in Annex 1.

³ See description in section 4. Practical measures, opportunities and recommendations for MSMEs supplying energy efficient products and providing renewable energy sources, energy equipment on access to finance, markets and advanced technologies in the Kyrgyz Republic

- Additional information was obtained from several enterprises that have introduced new services and products, or found interesting ways to deal with the crisis, through in-depth telephone interviews. Their stories were used to identify recommendations for creating a better investment environment for EE and RES in MSMEs in the Kyrgyz Republic.
- Data of the European Bank for Reconstruction and Development (EBRD) Assistance to Small Business Development Group (ASB) and the International Financial Corporation (IFC) Housing Microfinance (HMF) Kyrgyzstan projects were also used as examples.
- Studies on the impact of the pandemic on the economy and MSMEs prepared by the National Statistical Committee of the Kyrgyz Republic (NSC), the National Bank of the Kyrgyz Republic (NBKR) and various international institutions were used as additional sources of information on the impact of the COVID-19 crisis on the investment environment, income flows, working conditions, production environment and recommendations.
- Data from a pandemic impact survey conducted among 49 American Chamber of Commerce (ACC) member companies supported by Center for International Private Enterprise (CIPE) were used for comparison⁴. The answers for their survey were provided by companies of various scales with a number of employees from 10 to more than 500 people from 15 sectors of the economy (audit, consulting, legal services, the banking sector, the construction sector, etc.)
- The published statistics of NSC were used in the report to provide an overview of the impact of the crisis on MSMEs. Resolutions of the Government and the Cabinet of Ministers, as well as press releases of the Ministry of Economy and Finance of the Kyrgyz Republic (MoEF), published since the beginning of the pandemic, were also an important source of information.
- Media data was used in the report to restore the chronology of events.

1.3. Chronology of the crisis in the Kyrgyz Republic

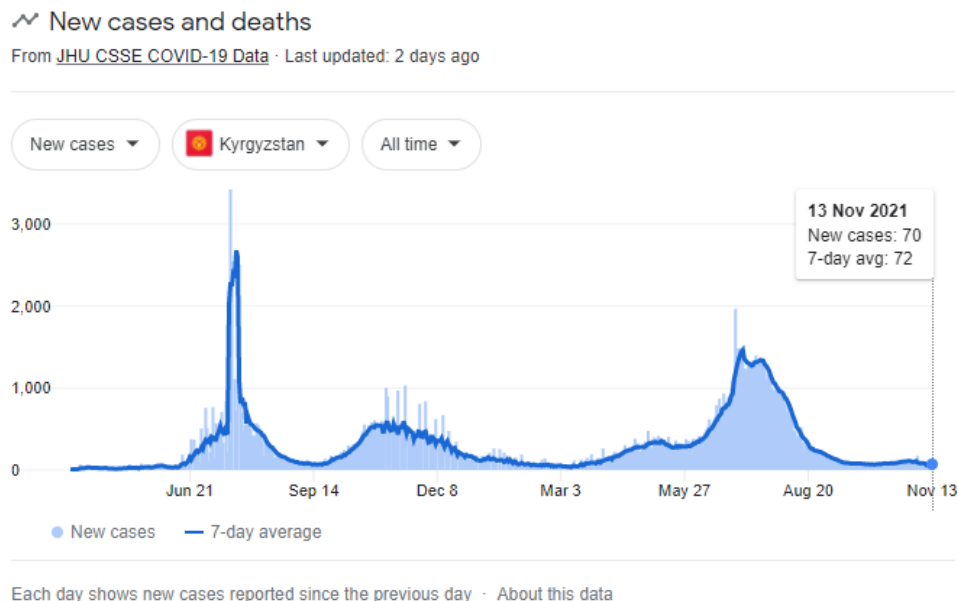
- On December 31, 2019, Chinese authorities announced the spread of an unknown type of pneumonia in the city of Wuhan. The main symptoms of the new virus were fever, cough, fatigue, shortness of breath, loss of taste and smell. With complications of the disease, people develop pneumonia⁵.
- On January 27, 2020, the President of Kyrgyzstan Jeenbekov held an extended working meeting with the Government of the country on the situation with the coronavirus spreading in China and in some countries of the world.
- At the end of February 2020, Kyrgyzstan banned the entry of citizens from Iran, Japan, South Korea and Italy, as there was an unfavorable epidemiological situation in these countries. Kyrgyzstan has not received passengers from China since the beginning of February.
- On March 1, 2020, the Kyrgyz authorities introduced a ban on crossing the state border with an ID-card (internal passport of the Kyrgyz Republic).
- On March 16, 2020, the Kyrgyz government closed schools and universities for quarantine. The Ministry of Education of the Kyrgyz Republic has developed a training program for distance education of schoolchildren. All training material was uploaded to the special sites of the department, and was also broadcast on TV. The schools remained closed until March 2020, when they were only open to first grade and graduating pupils.

⁴ <https://cloud.amcham.kg/s/ddTcRHkG2y39Lmx>

⁵ <https://kloop.kg/blog/2021/01/08/hronologiya-koronavirusa-chto-proizoshlo-za-2020-god/>

- A ban has been introduced on the operation of nightclubs, cinemas, computer clubs, as well as food courts and play areas in shopping centers.
- On March 17, 2020, Kyrgyzstan completely closed the border and banned entry to foreigners. The government has banned the work of restaurants and cafes with more than 50 seats, and the muftiate has suspended Jumah (Friday) prayers in the country.
- On March 20, 2020, 3 more cases of COVID-19 infection were detected in Kyrgyzstan - in the Nookat district of the Osh region. On the same day, the authorities introduced the state of emergency in this area. In the cities of Osh and Jalal-Abad, all institutions were closed, except for pharmacies and grocery stores, even public transport stopped working. And in the capital, only trolleybuses were allowed to run. In addition, all international flights were canceled, with the exception of Moscow and Novosibirsk.
- On March 21, 2020, the government introduced the state of emergency throughout the country and advised citizens not to leave their homes. The dynamics of the pandemic in Kyrgyzstan can be seen in Figure 1.

Figure 1 Detected new cases of COVID-19 in the Kyrgyz Republic⁶



- On March 22, 2020, a state of emergency was introduced in the territories of the cities of Bishkek, Osh and Jalal-Abad, Nookat, Kara-Suu districts of the Osh region, as well as in the Suzak district of the Jalal-Abad region. A curfew was also introduced from 20:00 to 7:00. A total of 42 confirmed cases of COVID-19 were registered in Kyrgyzstan as of March 24, 2020.
- 48 checkpoints were deployed around the capital. Citizens could only leave their homes for three reasons: buying medicines, buying groceries, and going to the doctor. All this had to be indicated in the route sheet.
- On March 25, 2020, the Kyrgyz authorities decided to introduce a state of emergency throughout the country.
- Meanwhile, the Government has approved a plan for fiscal measures to support entrepreneurship in Kyrgyzstan, whose activities have suffered to some extent from restrictions. This plan included

⁶ <https://github.com/CSSEGISandData/COVID-19>

measures to defer tax arrears, defer payments for the rental of municipal property, a restriction on exit tax inspections until 2021, etc.⁷

- On May 1, 2020, a phased resumption of economic activity began across the country.
- On July 16, 2020, the Ministry of Health combined statistics on COVID-19 and pneumonia. According to new statistics, the number of detected cases of infection with the virus has reached 25 thousand, and almost 800 people have died.
- After the parliamentary elections on October 4, 2020, mass protests began and a political crisis ensued. The epidemiological situation in Kyrgyzstan began to deteriorate after the massive protests caused by the parliamentary elections held with numerous violations - the second wave of the pandemic began.
- On December 1, 2020, cinemas, food courts and computer clubs resumed their work in Kyrgyzstan.
- On December 4, 2020, Kyrgyzstan allowed foreign citizens to fly in, as well as stateless persons with the negative PCR analysis.
- On December 29, 2020, the Kyrgyz government announced that in 2020 Kyrgyzstan received \$ 346.8 million to fight COVID-19. The authorities expect to receive another \$ 427.6 million in 2021.
- In the summer of 2021, Kyrgyzstan went through another wave of morbidity, which, in terms of the number of detected cases of COVID-19 patients per day, exceeded the second wave. By October 5, 2021, a total of 178 thousand people were ill, 2,600 of them died⁸.

1.3. The overall impact of the COVID-19 crisis on the economy of the Kyrgyz Republic

The average annual GDP growth rate of the Kyrgyz Republic in 2000-2019 was 4.4%, but this growth was unstable and ranged from -0.5% in 2010 to 10.9% in 2013. These sharp fluctuations were caused by numerous political, economic and other shocks. The main drivers of growth in recent years have been private consumption (100% of GDP) and investment in fixed assets (> 30% of GDP), with most of the investment in fixed assets in the form of construction expenditures, financed mainly by remittances from migrants and external borrowing. Table 1 presents the structure of the Kyrgyz Republic GDP by type of economic activity in current prices.

Table 1 Structure of GDP by type of economic activity in current prices⁹

Description of indicators	2019		2020 (preliminarily)	
	% total	% growth year on year	% total	% growth year on year
Overall	100.0	9%	100.0	-3%
Agriculture, forestry and fishing	11.7	9%	13.5	12%
Extraction of the mineral resources	1.9	101%	1.6	-16%
Manufacturing	14.7	12%	17.0	12%
Provision (supply) of electricity, gas, steam and conditioned air	2.2	-13%	2.3	0%
Water supply, purification, waste management and salvageable commodities	0.2	-38%	0.2	-2%
Construction	9.5	14%	8.3	-15%

⁷ kg.akipress.org/news:1635395?f=cp

⁸ <http://med.kg/ru/informatsii.html>

⁹ <http://stat.kg/ru/statistics/nacionalnye-scheta/>

Wholesale and retail; repair of cars and motorcycles	17.6	7%	16.2	-11%
Transportation and cargo storage	4.0	15%	3.0	-27%
Hotels and restaurants	1.6	6%	1.0	-41%
Hotels	0.4	-2%	0.1	-67%
Restaurants	1.2	9%	0.9	-34%
Information and communication	2.6	10%	2.7	-3%
Financial mediation and insurance	3.9	11%	4.0	0%
Real estate operations	2.9	27%	2.9	-3%
Professional, scientific and technical activities	1.4	-20%	1.5	3%
Administrative and supporting activities	0.5	16%	0.5	0%
State administration and defense, compulsory social security	5.9	10%	6.5	7%
Education	5.6	11%	7.1	23%
Public health and social services	2.4	6%	2.7	6%
Arts, entertainment and recreation	0.4	8%	0.5	3%
Other service activities	1.0	8%	1.1	2%
Financial intermediation services indirectly measured	-3.3	17%	-3.4	-1%
Net taxes on products	13.3	2%	10.8	-21%

Source: NSK

In 2020, the volume of GDP was around 548 billion soms and decreased by 3% compared to the 2019 indicator. The main share (90% of the total) is formed by enterprises of the real sector of the economy, and about 10% - by organizations of the financial sector. The bulk of GDP is formed by manufacturing enterprises (over 17% of the total), trade (16.2%), agriculture (13.5%), construction (8.3%), and education (7.1%).

In many ways, the formation of negative trends was influenced by the introduction of quarantine and restrictive measures in the republic in connection with the COVID-19 coronavirus infection pandemic. The most affected enterprises were trade, hotel and restaurant business, transport, tourism, art, recreation and entertainment, as well as the provision of other services, due to the complete or partial suspension of their activities during the quarantine period, and in the future the need to implement restrictive measures of social distancing. Due to the decline in the value of the national currency, deterioration in the financial situation was observed in enterprises with a high debt burden, denominated in foreign currency.

Contrary to the forecasts of the Ministry of Economy and Finance, who expected a 20% decrease in remittances to Kyrgyzstan, and the World Bank, whose scenario envisaged a 28% decrease, the cash flow from labor migrants to the republic decreased by only 1.25%. In the first half of the year, indeed, there was a sharp decrease in transfers. From January to May 2020, there was a decrease in remittances by 25.2% (-\$235.6 million compared to the same period in 2019), but since June, labor migrants began to increase the volume of amounts sent to the Kyrgyz Republic¹⁰.

¹⁰ <https://www.akchabar.kg/ru/news/v-2020-godu-denezhnye-perevody-v-kr-ocenili-23-mlrd-snizivshis-na-125/>

The Asian Development Bank (ADB) report highlights the following major shocks that have affected the aggregate supply of goods and services¹¹:

- (i) the closure of borders with the PRC, which made it impossible or more expensive to import cars, production resources and consumer goods from the PRC;
- (ii) the closure of all borders for the movement of people, which prevented the arrival of foreign workers and international tourists;
- (iii) the depreciation of the KGS, which at the same time increased the cost of imports and increased financial risks and debt servicing costs, thereby limiting the ability of the financial sector to provide new loans;
- (iv) the quarantine regime in Bishkek, Osh and other parts of the country, which has halted or hampered economic activity in urban areas as well as social distancing, tightening of sanitary requirements, limiting the number of people working in parallel or customers, served simultaneously, etc., which will remain for many months in the future and will reduce productivity and sales in many enterprises and markets.

Also, the following shocks had a negative impact on the economy of Kyrgyzstan:

- (v) a sharp drop of the incomes of many households during and after the quarantine regime;
- (vi) falling budget revenues, which will lead to a reduction in government spending on goods and services;
- (vii) a decline in demand for tourism services in Kyrgyzstan due to border closures and a decline in international commercial air travel, as well as a drop in disposable income affecting the middle class in Kazakhstan, the Russian Federation and Uzbekistan - the countries from which the Kyrgyz Republic attracts the largest number of foreign tourists.

According to the analysis of the National Statistical Committee of the Kyrgyz Republic¹², the activities of enterprises in the economy of the Kyrgyz Republic in 2020 were characterized by an increase in the number of operating enterprises, maintaining positive growth rates of gross income, obtaining a positive balanced financial result (profit) at the end of the year, and strengthening facilities.

However, there was a decrease in the number of profitable enterprises, the smallest amount of net profits and the largest losses from non-operational activities have been incurred over the past five years. Along with this, the tendency of growth of mutual non-payments continued, an increase in the indebtedness of enterprises on bank loans.

The volume of industrial production decreased in 2020 by 4% compared to 2019 and shows a trend towards recovery - an increase of 24% in the first half of 2021 relative to 2020. If this trend is kept, the volume of industrial production in 2021 will be 96% of the level of 2019, with a difficult recovery in the volume of products for individual entrepreneurs (64% of the level of 2019), especially in Bishkek (24% of the level of 2019).

Employment in 2020 amounted to 2,445.2 thousand people and has changed only slightly since 2019. However, the structure of employment underwent some changes, as can be seen from Table 2.

Table 2 Structure of employment of the population of the Kyrgyz Republic in 2019 and 2020¹³

Description of indicators	2019	2020
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¹¹ Asian Development Bank. 2020. Asia Development Outlook, Supplement, June 2020. Manila.

¹² <http://stat.kg/ru/news/pribyl-predpriyatij-ekonomiki-respubliki-v-2020-godu-snizilas-v-23-raza/>

¹³ <http://www.stat.kg/ru/>

	% growth to the volume of the previous year	
Total	3%	0%
Agriculture, forestry and fishing	-8%	1%
Extraction of the mineral resources	17%	-38%
Manufacturing	1%	-3%
Provision (supply) of electricity, gas, steam and conditioned air	22%	6%
Water supply, purification, waste management and salvageable commodities	95%	3%
Construction	16%	0%
Wholesale and retail; repair of cars and motorcycles	6%	-1%
Transportation and cargo storage	2%	-4%
Hotels and restaurants	15%	-2%
Information and communication	-4%	14%
Financial mediation and insurance	-5%	1%
Real estate operations	-39%	-2%
Professional, scientific and technical activities	-7%	-5%
Administrative and supporting activities	-14%	3%
State administration	-1%	8%
Education	3%	3%
Public health and social services	-2%	12%
Arts, entertainment and recreation	-9%	17%
Other service activities	4%	2%
Private household activities	2%	21%
Extraterritorial organizations activities	0%	0%

Source: expert calculations based on NSK data

Employment in the field of mining took the hardest hit (-38%), due to a 38% drop in the share of GDP. Due to the estimated loss of 40 thousand jobs¹⁴, household activity increased by 21%, employment in art, entertainment and recreation - by 17%, in information and communications - by 14% and employment in healthcare - by 12%.

1.4. Impact of the COVID-19 crisis on MSMEs in the Kyrgyz Republic

According to the National Statistical Committee of the Kyrgyz Republic, in 2019, within the number of small and medium-sized enterprises, 47% were individual entrepreneurs (IE), 2% were small enterprises, and less

¹⁴ <https://www.vsemirnyjbank.org/ru/news/feature/2021/03/17/one-year-later-in-the-kyrgyz-republic-s-battle-against-covid-19>

than 1% - medium-sized enterprises, while 51% were farms, which were also taken into account by the statistical body as MSMEs.

The total number of MSMEs, excluding farms, amounted to 428,383 enterprises. Over the 10 years, since 2010, the number of small businesses and individual entrepreneurs has grown by 43% and 68%, respectively, while the number of medium-sized enterprises has decreased by 5% and amounted to only 779 units in 2019.

Excluding peasant farms, individual entrepreneurs make up the bulk of the employed - 79%, with 15% of workers are employed in small, and 7% in medium-sized enterprises. The share of employment in the total employment in the economy is 16.8% for individual entrepreneurs, 3% for small enterprises and 1.4% for medium enterprises. The volume of gross value added (GVA) is 223 million soms, or 37.7% of GDP, where the GVA of individual entrepreneurs is 26.2% of GDP, small enterprises - 7.3%, medium-sized enterprises - 4.2%, as can be seen in Table 3.

Table 3 Number of employed and rate of employment in Kyrgyz Republic MSMEs in 2019

Type of MSMEs	Quantity	Quantity in %	Employment in %	GVA in % of GDP
Individual entrepreneurs	411,405	96%	16.8%	26.2%
Small enterprises (including micro)	16,199	3.9%	3%	7.3%
Medium-sized enterprises	779	0.1%	1.4%	4.2%
Total	428,383		21.2%	37.7%

Source: expert calculations based on NSK data

The majority of small and medium-sized entrepreneurs - almost 69% and 57%, respectively, are located in Bishkek, the capital of the Kyrgyz Republic, the number of individual entrepreneurs in Chui and Osh regions is also slightly higher than in other regions - slightly more than 16% and 20%, respectively.

The volume of gross value added produced by small and medium-sized businesses in 2020 decreased by 17%, including 17% for small businesses, 10% for medium-sized enterprises and 18% for individual entrepreneurs. The share of gross value added of small and medium-sized businesses in GDP fell by 14% in total, by 5% - for medium-sized enterprises and by 15% - for small enterprises and individual entrepreneurs. Thus, medium-sized enterprises suffered less than small ones, and individual entrepreneurs suffered the most.

A comparison of the main indicators of small and medium-sized enterprises in the period of the first 6 months of 2021 shows that in 2021 there is a tendency to restoration of the pre-crisis position of MSMEs. The volume of gross value added produced by small and medium-sized enterprises, in general, increased by 22%, by 31% for small-sized enterprises, by 18% for medium-sized enterprises and by 21% for individual entrepreneurs.

The share of gross value added of small and medium-sized businesses in GDP increased by 10% in general, by 5% - for medium-sized enterprises and by 17% - for small enterprises and 8% - for individual entrepreneurs. Thus, individual entrepreneurs and medium-sized enterprises recover more slowly than small enterprises. In addition, provided that the growth rates of the main indicators remain unchanged, the share of gross value added of small and medium-sized enterprises in GDP by the end of 2021 will be 33% lower than the level of 2019.

The total number of operating MSMEs did not change from 2019 to 2020, but there was a slight increase in the number of small enterprises - by 1%, and a decrease in the number of medium-sized enterprises by 8%, with MSMEs of the Chui region and Bishkek particularly affected (1% overall decrease and 12% for medium-sized enterprises), with a simultaneous increase in the number of MSMEs in the Naryn, Batken, Talas regions and the city of Osh (by 13%, 9%, 7% and 6%, respectively). In the first half of 2021, compared to the first half of 2020, there is an overall increase in the number of MSMEs by 5%.

With a general decrease in revenue (gross income) from the sale of products, goods, works, services, million soms in 2020 relative to 2019 by 92%, there was a strong redistribution of income between the regions of the Kyrgyz Republic. For small enterprises, the largest decrease was observed in revenue for Osh and Jalal-Abad region (by 30% and 17%, respectively), but there was an increase in revenue in Batken, Naryn regions and the city of Osh (by 21%, 19% and 18%). The revenue of medium-sized enterprises in Talas and Osh regions fell by 86% and 50%, but the revenue of MSMEs increased in Naryn (93%) and Batken regions (38%).

Comparison of revenue indicators for the first half of 2021 with the first half of 2020 shows an overall growth of 64%, the best recovery indicators in Osh (108%), Batken region (95%) and the city of Bishkek (74%). While maintaining economic recovery trends, revenue can be expected to decrease by 6% compared to 2019.

1.5. Measures taken by the Government of the Kyrgyz Republic in response to the challenges of the pandemic

The policy of the Government and, from March 2021, of the Cabinet of Ministers of the Kyrgyz Republic, in response to the ongoing and expected economic downturn, mainly consists of a package of fiscal incentives to support export-oriented enterprises and MSMEs through the Anti-Crisis Fund, along with some temporary taxation and debt relief measures. Measures to stimulate domestic demand and increase spending on social protection have not yet received much attention.

The stated goals of the government's response to the pandemic are to protect public health, ensure timely economic recovery, protect household welfare and accelerate the resumption of normal public life. However, the actual policy responses formulated in the stimulus packages developed in March and May focused primarily on increasing enterprise liquidity rather than on household social protection. The group preparing the socio-economic assessment of the Asian Development Bank and the United Nations Development Program, based on the request of the Government of the Kyrgyz Republic, summarized the actions taken in Table 4.

Table 4 Government policy responses to the COVID-19 crisis¹⁵

Policy area	Key measures	Time
Fiscal policy	Budget reduction of non-priority items	Immediate ¹⁶ , Short-term
	Mobilizing external aid, including attracting new grants, concessional loans and debt	Immediate, Short-term

¹⁵ COVID-19 in the Kyrgyz Republic: Socioeconomic and Vulnerability Impact Assessment and Policy Response, ADB, UNDP, 2020, <https://www.adb.org/documents/covid-19-kyrgyz-republic-socioeconomic-vulnerability-impact>

¹⁶ Note: Immediate term = until June 30, 2020, short term = until the end of 2020, medium term = until 2021 or even 2022.

	relief	
	Measures to reduce taxes and rent for MSMEs	Immediate, Short-term
	Tax concession and tax relief for medium and large enterprises that meet certain criteria (confirmed quarantine damage, contribution to food security, etc.)	Short-term and medium-term
	Capitalization of enterprise support programs	Short-term and medium-term
	Increased spending on the health sector	Immediate, medium-term
Investment policy	Deployment of an enterprise support program (mainly concessional lending) using the existing Russian-Kyrgyz Development Fund (RKDF) and new mechanisms of the anti-crisis fund	Short-term and medium-term
	Refocusing some Public Investment Programs PIP projects to support pandemic response	Immediate, medium-term
Monetary and financial policy	Return from de facto fixed to regulated floating exchange rates	Immediate
	Changes in National Bank of the Kyrgyz Republic (NBKR) policy rates to overcome inflationary risks	Immediate, medium-term
	Easing off regulation of the financial sector to support loan restructuring to the non-financial sector	Immediate, Short-term
	Standby mode to provide necessary liquidity to the financial sector if necessary	Immediate, medium-term
Trade and regional integration	Coordination of cross-border trade within the Eurasian Economic Union (EAEU)	Immediate, medium-term
	Negotiations with China and other neighbors to open borders for freight transport	Immediate, Short-term
Regulatory policy	Reducing the number and frequency of inspections of enterprises by state bodies	Immediate
Food security policy	Expansion of the list of basic food and non-food products with regulated prices	Immediate
	Control of retail and wholesale prices for basic food, replenishment of wheat stocks for emergency cases	Immediate, Short-term
Social protection policy	Food assistance to vulnerable households	Immediate, Short-term

Source: COVID-19 in the Kyrgyz Republic: Socioeconomic and Vulnerability Impact Assessment and Policy Response, ADB, UNDP, 2020

On April 3, 2020, the Law “On stabilization of the socio-economic situation in the context of the State of Emergency” was adopted, providing:

- provision of the possibility of deferral or installment of tax arrears resulting from force majeure without presentation of documents on bank guarantee for a period not exceeding 1 year;
- extension of tax reporting deadlines for business entities;
- extension of the deadline for submitting a single tax statement for 2019;
- norms of non-application of tax sanctions and penalties for late fulfillment of tax obligations.

On April 20, 2020, the Government approves by another decree a number of measures aimed at supporting business, including:

- extension of deadlines for reporting on state social insurance funds;
- exemption from fines for late payment of insurance premiums for the amount of arrears for the reporting periods.

Also, until January 1, 2021, a ban was introduced on inspections by Tax authorities, with the exception of unscheduled audits, inspections of entities engaged in their activities in the production and circulation of excisable groups of goods and desk audits after the completion of an emergency.

Until July 1, 2020, the dates for the implementation of the components of the electronic system of tax procedures (electronic invoice, electronic bill of landing and virtual cash register) were postponed.

Until January 1, 2022, the moratorium on inspections by state regulatory bodies has been extended.

Until January 1, 2021, a temporary ban was introduced on conducting bankruptcy procedures for enterprises.

The Action Plan of the Government of the Kyrgyz Republic for 2020 to restore economic activity and support the activities of business entities¹⁷ was adopted on May 6, 2020, establishes that individual entrepreneurs and organizations for the reporting periods of the second quarter of 2020 and / or from June 1 to August 31, 2020 have the right to submit without a written application until October 1, 2020¹⁸:

- tax reporting, with the exception of tax reporting on indirect taxes when importing goods into the territory of the Kyrgyz Republic from the territories of the member states of the Eurasian Economic Union;
- reporting on state social insurance funds;
- report on deductions for the development and maintenance of infrastructure of local importance.

An important point of the Plan was the creation of an Anti-Crisis Fund in the amount of 14.0 billion soms preferential lending to business entities. Concessional lending to small and medium-sized enterprises was carried out subject to the introduction of automated systems for transparent accounting and reporting of business activities (cash registers with online data transfer function, electronic system of tax procedures). Also, concessional lending was implemented for the production sector in the areas of export orientation and import substitution and for regional projects, including those comprising regionally significant clusters.

During the months of the pandemic, the Ministry of Economy revised the obligations of tax contracts for the period of absence of economic/entrepreneurial activity (points of trade and services) for the period of emergency; restructured arrears on accrued interest, penalties, tax sanctions, fines on taxes and insurance premiums. "Capital and property were legalized with guarantees of preservation of property and exemption from any payments, taxes and fines on the amount of capital being legalized. A control and monitoring

¹⁷ <http://cbd.minjust.gov.kg/act/view/ru-ru/218163?cl=ru-ru#p1>

¹⁸ <http://dv.kg/?p=31806>

mechanism (supervision) has been introduced to ensure the smooth operation of budget-forming enterprises.

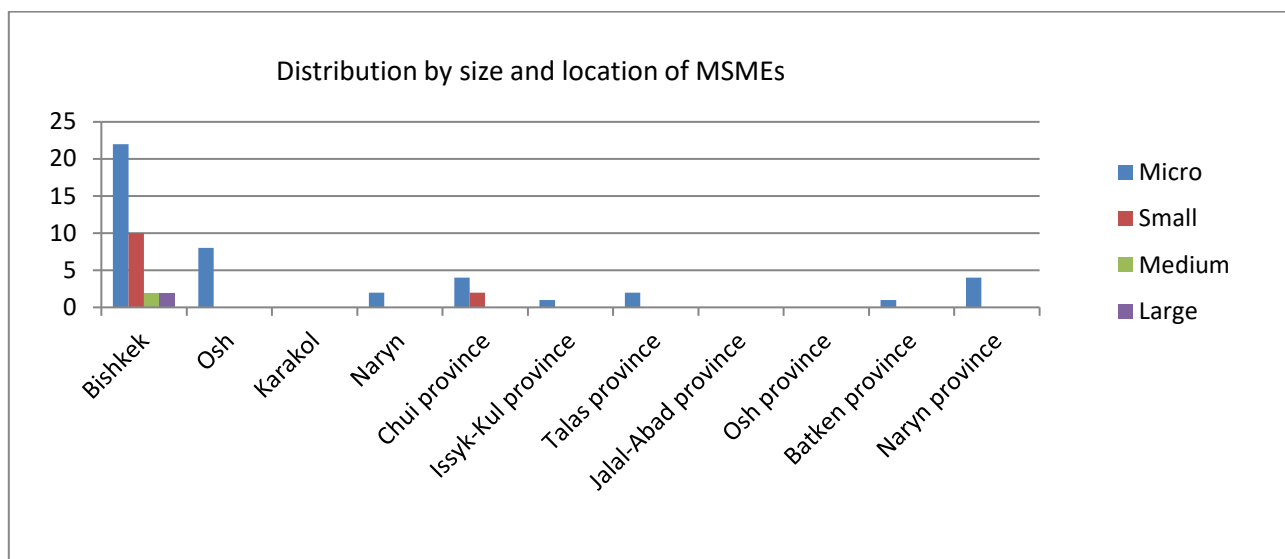
In order to ensure further support for the living standards of pensioners from October 1, 2020, in accordance with the decrees of the Government of the Kyrgyz Republic No. 480 and 481 of September 11, 2020, indexation of the basic and insurance parts of the pension was carried out. At the moment a comprehensive program of post-crisis recovery and further development of the economy of the Kyrgyz Republic is being implemented.

1.6. Interviewed MSMEs in the field of energy efficiency and renewable energy sources in the Kyrgyz Republic and the impact of the crisis

In total, 60 respondents from the business related to the introduction of renewable energy and energy-efficient technologies and non-governmental organizations were interviewed in the framework of this study. By location, 60% of respondents are located in Bishkek, 10% in the Chui region and more than 13% in Osh, as is shown in Figure 2. This distribution corresponds to the general distribution of MSMEs in Kyrgyzstan.

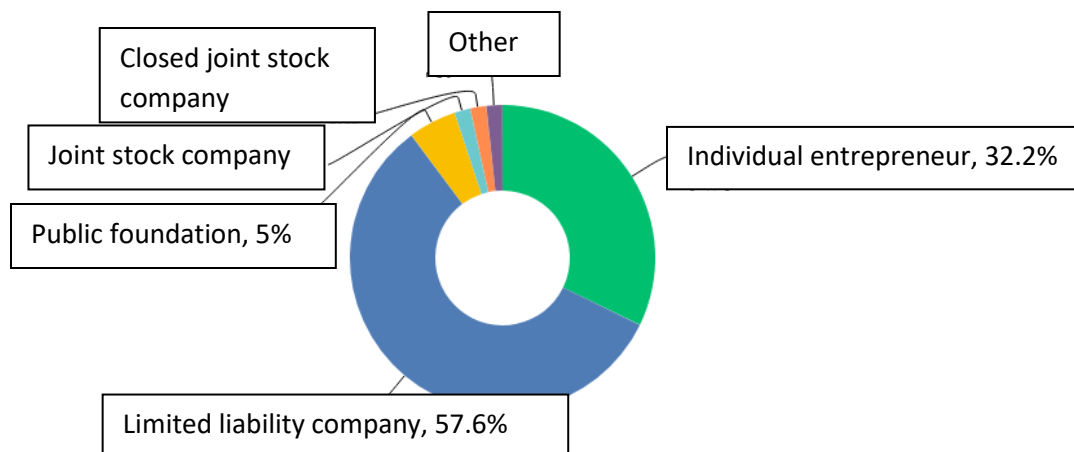
The information gathered from the results of the survey showed that 30% of the respondents are manufacturing enterprises, and the remaining 70% provide services. Of the manufacturing enterprises, in terms of the number of employees, 77% are micro-enterprises and 23% are small enterprises.

Figure 2 Distribution of MSMEs by size and location



The average duration of operation of enterprises is 11 years, which indicates that many of them were organized in 2009-2010.

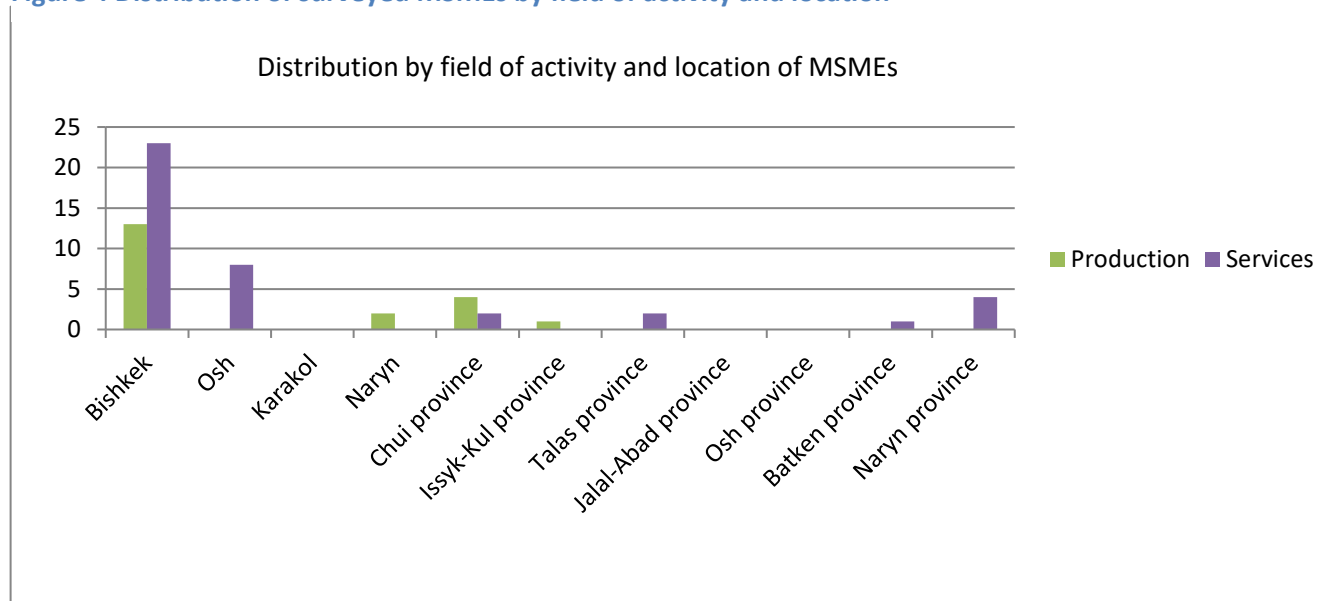
Figure 3 Distribution of surveyed MSMEs by legal form



According to the registration form, among the surveyed 60 companies, 57.6% were limited liability companies, 32.2% were individual entrepreneurs, 5% were public foundations (civil society organizations), and 1.7% of each were Associations, Joint Stock Companies (JSC) and Closed Joint Stock Companies (CJSC), as shown in Figure 3.

From the respondents in the service sector, 71.4% are micro-, 19% are small, 4.8% are medium, and 4.8% are large enterprises. In this regard it can be concluded that the structure of the RES and energy efficiency sector, on average, corresponds to the general distribution structure of enterprises in the country's economy: 68% micro-, 22% - small and 5% - medium-sized enterprises. Since 73% of the respondents preferred not to answer the question about the volume of turnover, classification on this basis is impossible.

Figure 4 Distribution of surveyed MSMEs by field of activity and location



In addition to the production and provision of services, 10% of MSMEs conduct practical research, about 12% provide training services, 3% are engaged in the development of technical standards and regulations, and 3% are engaged in legislative activities in the field of renewable energy and energy efficiency.

Figure 4 shows the distribution of the surveyed MSMEs by field of activity and indicates the predominance of MSMEs in Bishkek and Chui region, which corresponds to the general statistics

Figure 5 Distribution of MSMEs in the field of renewable energy by technology and location

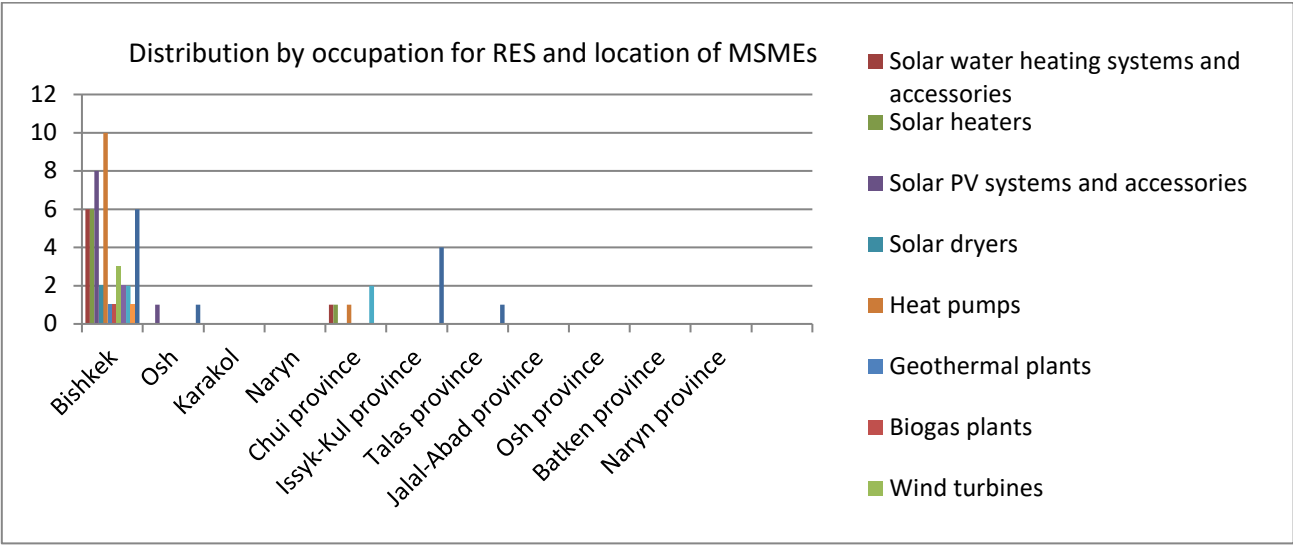
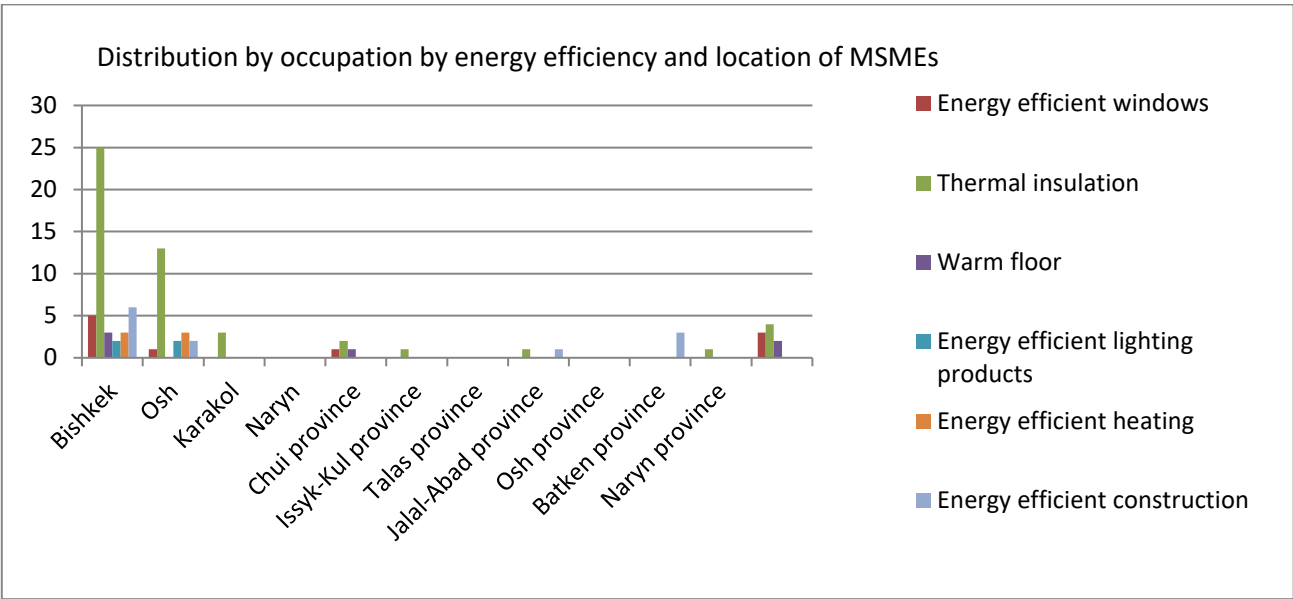
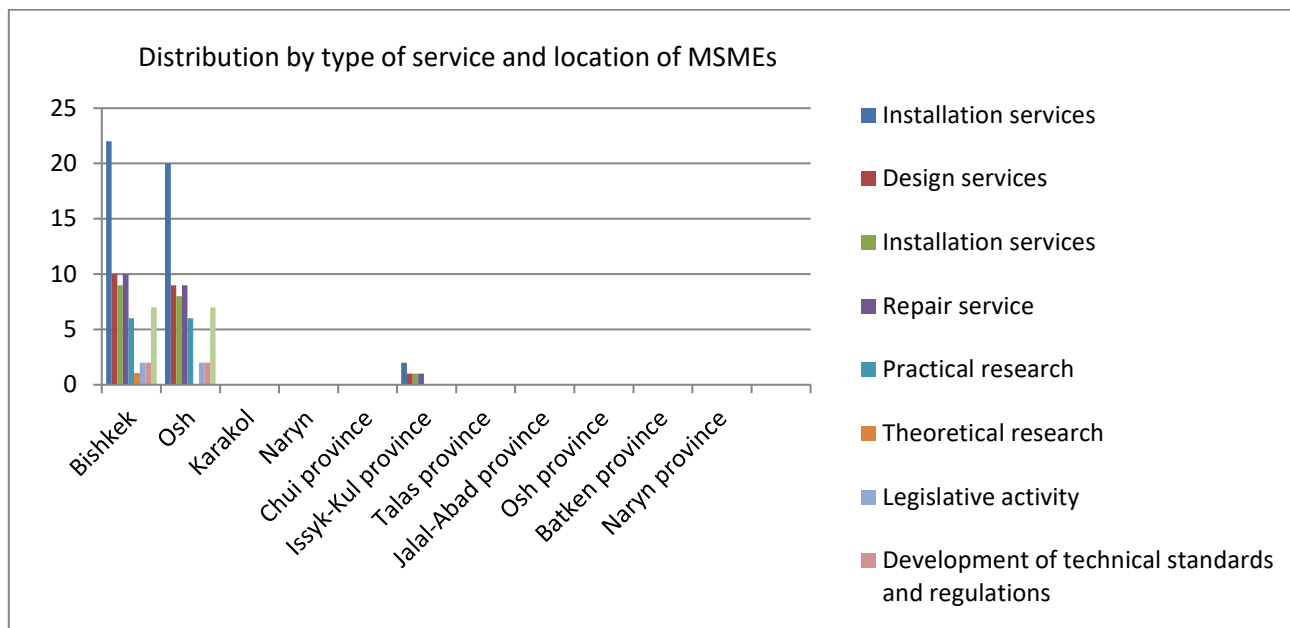


Figure 6 Distribution of MSMEs in the field of energy efficiency by technology and location



Figures 5, 6 and 7 show, that most MSMEs in the field of RES and energy efficiency production and services, are located in Bishkek, which indicates the underdevelopment of the market for renewable energy and energy efficiency in the country.

Figure 7 Distribution of MSMEs by type of service and location



Among survey respondents, the average decrease in gross income as a result of the COVID crisis in 2019-2020 and a decrease in demand was more than 50%: for MSMEs in the manufacturing sector - by 65.4%, and among MSMEs in the service sector - by 45.4%.

Micro-enterprises suffered less, both in the manufacturing sector (58% decrease in gross income) and in the services sector (47% decrease) than small and medium-sized service enterprises (67% decrease). 43% of MSMEs manufacturers and 82% of MSMEs providing services have decreased production.

MSMEs noted:

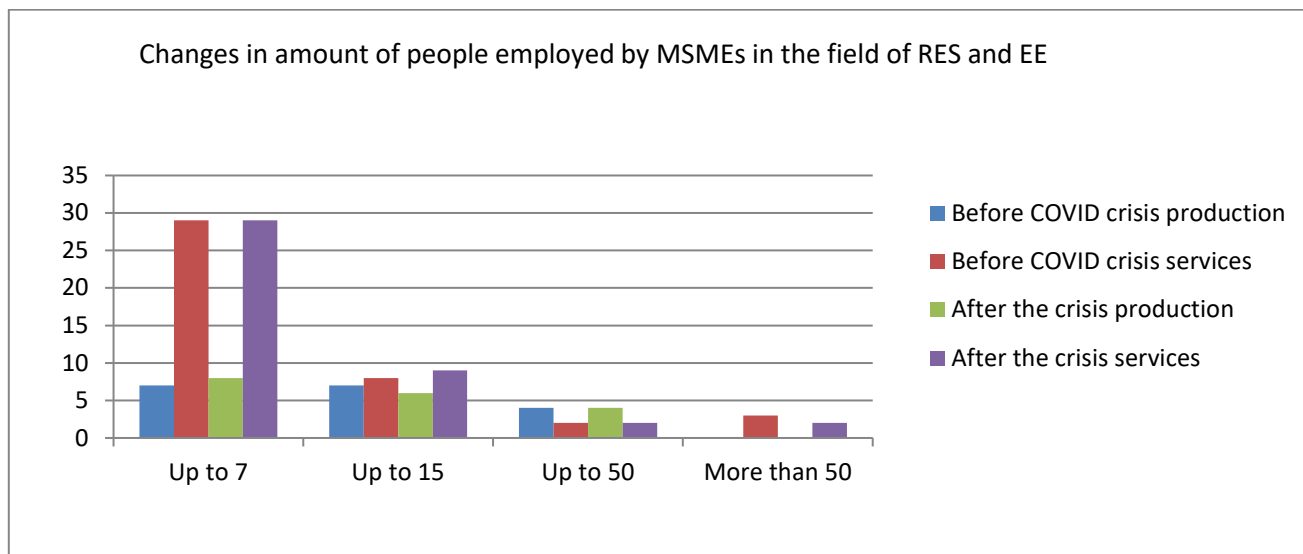
- “All RES with high initial investments began to be in lower demand, the demand for out-of-the-box solutions that can serve as equipment for business - solar dryers, for example, increased.”
- “Due to the pandemic, the demand for heat pumps fell to 0%. Not a single heat pump was sold during the year!”
- “Rural residents stopped insulation of their homes by 90% or completely due to rising prices and lower incomes”.

1.6 Response of MSMEs in the field of energy efficiency and renewable energy in the Kyrgyz Republic to the COVID-19 crisis

1.6.1 Employment

The Kyrgyz Republic had used preventive measures to limit the spread of COVID-19 even before the widespread spread of the virus, and the Government had introduced measures such as quarantine, restriction of mobility and suspension of enterprises, which, of course, had an impact on the business environment. Most MSMEs felt the significant impact of restrictive measures and tried to keep workers and restructure operations.

Figure 8 Changes in employment of MSMEs in the field of RES and EE



Among the respondents to the survey of the American Chamber of Commerce of the Kyrgyz Republic, three factors affected the activities of companies during the pandemic¹⁹.

- 54% of companies faced a decrease in demand for goods and services, which affected the profitability of companies;
- 45% of companies faced full or significant impact of legal restrictions on activities;
- 37% of companies were significantly affected by shortages of raw materials and / or supply chain disruptions.

Figure 8 shows that after the crisis there were more companies with lower number of employees, which means that some small and medium enterprises have lost some employees. However, most MSMEs managed to keep their staff - 95% of respondents say that they did not have to dismiss employees. 73% of MSME personnel have had COVID-19 in 2020. One company noted that they had to dismiss female employee due to financial problems caused by the crisis in MSMEs.

Five percent of MSMEs resorted to a 50% reduction in wages, of which 3.4% reduced salaries for women employees. Almost 13.5% of MSMEs have reduced busyness of employees while maintaining wages. On average, employment decreased by 44% and only for female employees. In 13.4% of MSMEs employees have left the company for own COVID-19 reasons.

MSMEs responded to the crisis by switching to remote mode (37% overall: 56% of production companies and 29% of MSMEs providing services). Some products and services had to be abandoned by 23% of MSMEs, including 39% of manufacturing and 17% of MSMEs providing services.

Almost 7% of MSMEs plan to transform their field of activity due to the consequences of the pandemic, including the introduction of new goods and services, optimization of activities to reduce costs, a constant shift in focus towards services, research, since these activities are not affected by the import of materials.

One company had to completely leave the market of heat pump supply due to uncertainties in procurement and decreased willingness of the clients to wait for longer periods of time. In addition, about 3.5% (public organizations) doubt the feasibility of further activities in the absence of a constructive dialogue with state bodies, lack of attention to business opinion, refusal to involve private partners in legislative work, lack of

¹⁹ <https://economist.kg/novosti/ekonomika/2021/05/26/biznes-ne-vosstanovilsya-posle-pandemii-ot-gosudarstva-po-prezhnemu-trebuetsya-podderzhka-analiz/>

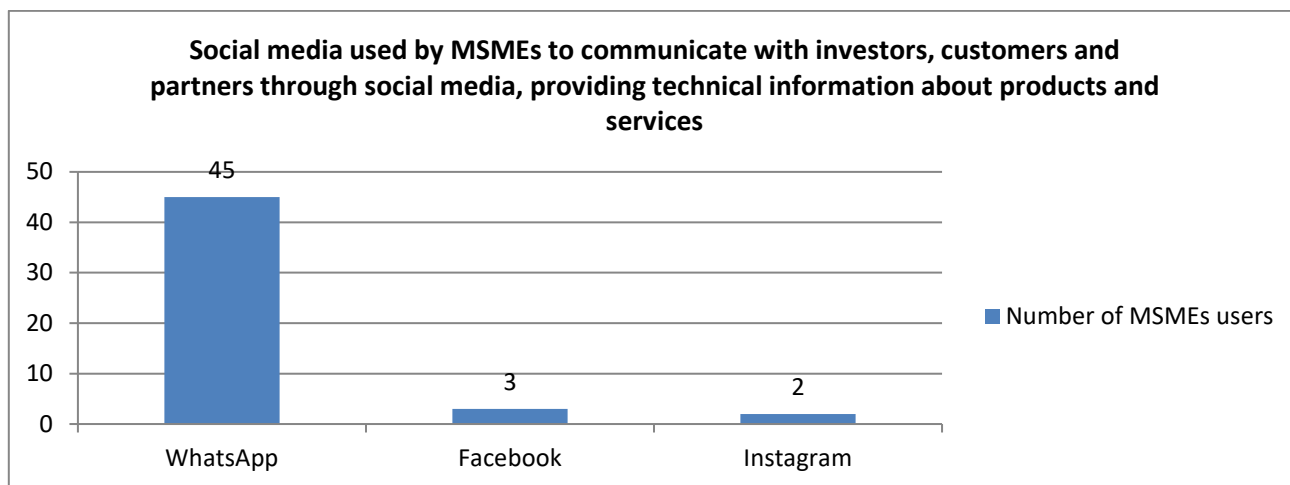
implementation of existing norms of legislation in the field of RES and EE. MSME’s direct comments on the effect of the crisis are provided in Table 5.

Table 5 Quotes of MSME on products and services that had to be suspended

Manufacturing companies	Service companies
<ul style="list-style-type: none"> • “Had to postpone deliveries” • “Had to suspend installation services” • “Had to suspend installation due to restrictions for traveling” • “Installation and production services stopped completely during the pandemic crisis, due to lack of materials” • “Installation of solar water heating systems stopped since there were delays in the supply of components” • “Stopped supplying solar water heating systems due to lack of normal supplies from China” • “Stopped conducting trainings” 	<ul style="list-style-type: none"> • “Demand fell 100%” • “Suspension of installation services” • “Stopped installing” • “Didn’t meet deadlines of the implementations and refusals of the investors from the project” • “Complete lack of sales, only consultations by phone” • “Demand fell by 100%. Prices increased by 100-120%. Now only builders in Osh purchasing it, rural buyers have practically stopped buying” • “Complete closer and termination of all sales for 3 months”

As is shown in Figure 9, over 28% of surveyed MSMEs in 2020 expanded communication with investors, customers and partners through social networks, providing technical information about products and services, 79% of them - from the manufacturing sector. Two companies (3.4%) tried to find new suppliers and customers using business associations, industry associations, and the Chamber of Commerce and Industry.

Figure 9 Social networks used by MSMEs



16.7% of MSMEs have implemented online sales (30% of them are manufacturing enterprises), 5% have introduced goods and services to combat COVID-19 and recover from a pandemic, 6.7% have switched to the service sector by retraining their employees or diversifying their activities in projects where remote assistance can be provided.

None of the surveyed MSMEs provided paid online trainings or attract funds from donor agencies and other sources for Research and Development (R&D) on innovative and in-demand technical solutions. This might

be connected with several factors, such as oversaturation with free trainings, and related low preparedness to pay for trainings by the population.

In comparison, MSMEs interviewed by the American Chamber of Commerce²⁰ have responded to the crisis in the following way:

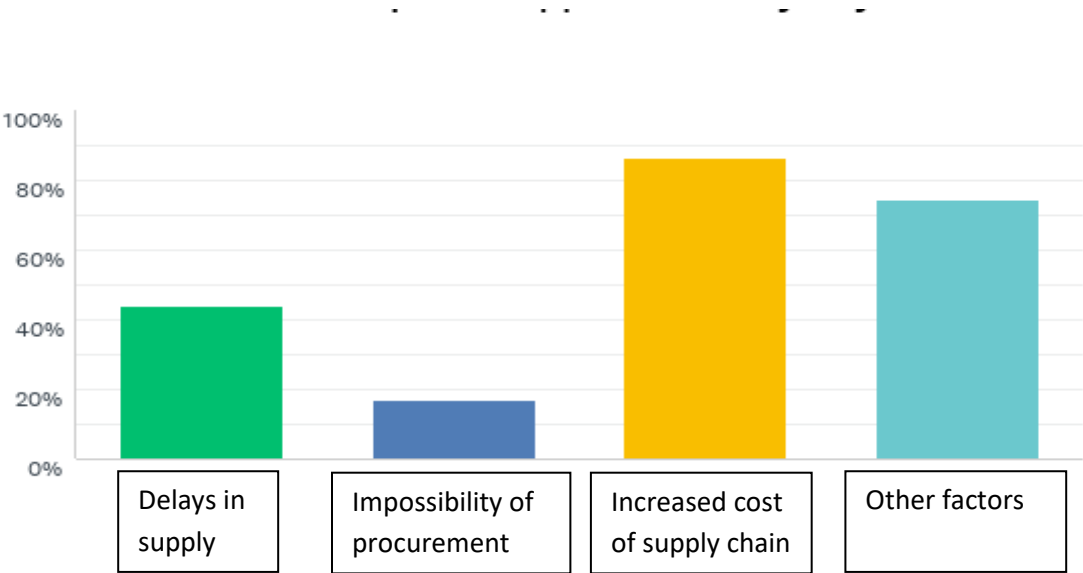
- 86% of companies have reduced administrative and labour costs;
- 51% of companies postponed current and strategic investments;
- 41% of companies have created new business areas.

Also, entrepreneurs reduced their operations, postponed obtaining loans to secure working capital, and strived to create new export opportunities. 10% of entrepreneurs surveyed by ACC faced a complete suspension of business activities.

1.6.2 Supply chain

Among the survey respondents, 43% note delays in the supply of materials and equipment, delivery times have doubled; in many cases suppliers had to temporarily switch to alternative and more expensive delivery methods: “A big problem with supplies from China in connection with the pandemic is that there is still no road transport and railway transport, since (according to news sources) China requires vaccination of most of the population. What we bring is now only air, and it is very expensive– up to 13 USD per kg.” About 17% of MSMEs note the impossibility of deliveries.

Figure 10 Impact of the pandemic on the supply of materials and equipment



As shown in Figure 10, 85% of MSMEs noted an increase in the cost of components by more than 50% on average.

20% of respondents noted that they had stopped working with some partners in the country and abroad, 15% had already found some new partners and 20% continue to look for additional suppliers within the Kyrgyz Republic. 28.4% of MSMEs found new partners and 10% are looking for new suppliers of materials and equipment abroad.

²⁰ <https://cloud.amcham.kg/s/ddTcRHkG2y39Lmx>

There is a decrease in the volume of sales by 50%: "Everyone expects to be paid up front." In addition, it is noted that "Due to the delivery time (at least 3 months), it is difficult to work with equipment on order – no-one wants to wait for such a long time."

1.6.3. Financial liabilities of MSMEs

More than 23% of surveyed MSMEs had financial commitments on loans before the COVID crisis in 2019, 8.4% on microloans, slightly less than 2% on private loans. Almost everyone who had financial obligations had difficulties to pay them off.

When asked whether your bank, microcredit organization or borrower provided any support in repaying loans (deferral, lower interest rates, etc.), 15% of respondents noted that they were offered to defer the interest payments, 5% had reached an agreement with banks on individual terms, the rest noted that the postponement did not bring relief to the financial burden: "The postponement of the interest payments was offered for 3 months, and then I had to pay at higher interest rates. It was even more difficult." One of the respondents attracted additional credit funds to organize remote work.

1.6.4. Movable and immovable property of MSMEs

When asked if you had to sell or stop using real estate or equipment as a result of the COVID crisis in 2019-2020, 6.7% of respondents noted that they had to suspend using the some of the real estate, 3.4% - stopped using some equipment and 8.5% - stopped using vehicles.

1.6.5. Support of MSMEs from the state and international organizations

To the questions: "Did the state provide you with financial assistance - loans, tax cuts, subsidies or other assistance in 2019-2020?", "Did international organizations help you?" all respondents answered negatively.

1.6.6. Necessary measures to support MSMEs from the state and international organizations

The consequences of the pandemic continue to affect the activities of entrepreneurs in Kyrgyzstan. According to a survey by the American Chamber of Commerce²¹ of the Kyrgyz Republic, business expects the following problems by the end of 2021:

- 49% noted that a decrease in demand for their goods and services is possible;
- 41% of companies indicated that they may face an employee retention problem;
- 38% of companies expect supply chain disruptions and raw material outages to occur;
- 35% of participants noted that they will face collection problem in the next months;
- 34% of companies estimate that one of the problems in the activities of companies will be the lack of working capital;
- 30% of survey participants noted that in the coming months there may be legal restrictions on activities that will affect their work.

The ACC also aired forecasts of entrepreneurs to return to the level of productivity that was observed before the pandemic: most of the companies surveyed (34%) will need from 7 months to 1 year to return to the previous level of productivity. 15% of entrepreneurs reported that they only need 1-6 months to recover. 13% of the business will recover within 2-3 years, and 4% of the respondents will need more than 5 years to do this. It is important to note, however, that 34% of the companies surveyed did not have a decline in 2020.

According to the respondents from RES and EE sector, several measures of state support would help to cope with the negative consequences of the pandemic:

- Improving the conditions of taxation and administration - 18%

²¹ <https://cloud.amcham.kg/s/ddTcRHkG2y39Lmx>

- Providing support and assistance to companies and individual entrepreneurs – 14%
- Stimulating the economy to boost consumer spending – 12%
- Developing a clear strategy for maintaining a sanitary and safe environment and maintaining a transparent policy to combat COVID-19 and prevention of ill health – 8%
- Maintaining a stable political situation and maintaining the legal framework – 6%
- Providing concessional lending to replenish operational capital – 6%
- Freezing loan interest payments and of accumulation of interest on loans - 6%

In the RES and EE sector, according to the results of the study, more than 50% of MSME respondents expressed recommendations on providing to MSME soft loans for 2-5 years at 5-10% per annum, on simplifying the procedures for providing loans for agricultural business up to 1-2 days without collateral and the provision of interest-free loans for 2-5 years.

The rest of the respondents from the RES and EE sector made recommendations aimed at:

1. Development of strategic goals and optimization of the legal framework in the field of renewable energy and energy efficiency – 22%:

- It is necessary to competently manage the energy sector, approve the program for the development of the energy sector, planned development, clarity of goals in the field of renewable energy
- It is necessary to develop and really implement a strategy for the development of energy efficiency, RES and biogas, as well as specific implementation plans and implement them, not just write on paper
- Accelerate the adoption of regulations governing the field of renewable energy and energy efficiency
- Subsidize renewable energy and energy efficiency consumers (farmers, etc.), up to 30 kW
- The time has come for the approval of the tariff policy covering the cost of electricity and heat production, setting appropriate FIT tariffs for the purchase of electricity from different renewable energy sources, corresponding to the cost of energy from renewable energy sources in worldwide practice, otherwise serious investors will not come to the field of renewable energy and we will have to rely on the import of electricity, supporting the economies of other countries, and not ours
- The development of regulatory legal acts for micro generation, preferential tariffs for buyers of heat energy from renewable energy sources, a reduction in customs duties on energy-efficient goods such as heat pumps are much-needed steps at the moment
- It is necessary to conclude contracts with RES for the supply of electricity from RES, to increase the coefficients from 1.3 for solar to 3 (as a result, the tariff for 1 kWh of solar electricity would be equal to electricity tariff for manufacturing industry, multiplied by 3)
- Change the methodology for calculating electricity and heat tariffs for private producers - it is necessary to modify the existing tariff calculation system, which is still carried out using the established forms of cost reporting developed and appropriate only for natural monopolies
- Guarantee the purchase of electricity from small hydroelectric power plants, set tariffs that ensure the return on investment
- Urgently adopt a simplified regulatory framework for the construction of small hydropower plants and renewable energy sources, land acquisition for renewable energy sources, tariffs for renewable energy sources, import of equipment for renewable energy sources
- Simplify the procedures for customs clearance of renewable energy equipment

2. Resolving the situation with the transportation of goods between the Kyrgyz Republic, the EAEU countries and China – 16%:

- Solve the problem with logistics – delivery of goods from China

3. Compliance with existing legal regulations – 8%:

- Implementation of existing laws for renewable energy sources and energy efficiency, stimulation of the development of micro-generation from heat pumps, development of private company's cooperation with government agencies (replacement of electric boiler houses)
- It is necessary to comply with the existing legislation, work in the legal field, officially work with Associations of RES to improve legislation and conditions for attracting investments, technical standards and other issues
- Implementation of existing RE and EE legislation, especially by-laws
- Compliance with current legislation in the field of renewable energy sources and energy efficiency, introduction of a tariff policy that reflects the real cost of electricity and heat production

4. Stabilizing the political situation and maintaining peace – 6%:

- Stabilize the political environment and show political will to address energy and agricultural challenges, especially waste management
- We need systematic work on the development of renewable energy sources and the introduction of energy efficiency, independent of political changes and the ambitions of officials
- "There should be no war!"
- The main thing is peace

5. Raising public awareness about RES and energy efficiency – 5%:

- Raising public awareness about the energy sector and RES and EE solutions
- Informational support is needed to inform the population about heat pumps

6. Providing additional preferences for manufacturers and importers of renewable energy equipment – 5%:

- Reducing taxes on renewable energy products, such as VAT on customs clearance of equipment for generating energy from renewable energy sources and energy efficient equipment, simplifying customs clearance procedures
- Put protective duties on Chinese products, or abolish customs duties for manufacturers, abolish VAT for manufacturers of equipment and electricity
- There is a need to provide grant support for the development and purchase of equipment, for the supply of photovoltaic systems and efficient gas boilers

7. General improvement of the economic situation and the fight with the pandemic – 5%:

- Organize 70% vaccination of the population as soon as possible
- Organize a normal learning process in schools
- To sell heat pumps, the population must have earnings, so the Government needs to create better working and living conditions in the Kyrgyz Republic

About 3% of the respondents believe that "The government is not able to help; therefore, we work by ourselves, as we cannot rely on them".

2. Renewable energy and energy efficiency best practices relevant to MSMEs response to COVID-19 crisis and post-crisis recovery in Kyrgyzstan

2.1. Development and promotion of solar dryers (Center for RE and EE development)

The Center for Renewable Energy and Energy Efficiency Development (CREEED) was founded in 2012 in Bishkek and is a one-stop-shop for information, advice and other services in the field of renewable energy and energy efficiency in Kyrgyzstan. The main activities of the Center is the adaptation, development, supply, installation and repair of equipment for renewable energy sources, especially solar technologies, including solar water and air heaters, solar dryers, and solar photovoltaic systems.

Due to the crisis, when the demand for more expensive solutions using renewable energy has fallen sharply, the company focused on promoting the SD-10 solar dryers, designed to dry 10 kg of raw materials, as well as refining a larger two-chamber solar dryer, SD-100, designed for drying 100 kg of raw materials. The examples of produced solar driers are presented in Figure 11.

The SD-10 solar dryer was originally developed as part of the UNDP project "Sustainable Energy Solutions for Rural Citizens of Kyrgyzstan" in 2016 and was tested to verify its effectiveness with USAID support under the "Building the Future" project for the American University of Central Asia (AUCA) in 2017.

The dryer can dry fruits, vegetables, kurut (qurut, qurt)²², spices, herbs. It consists of a heating zone, a drying zone and a solar panel. The heating zone includes solar air collector, and the space behind the collector, which houses the backup heating panel, with a capacity of 600 to 900 watts. Backup heating can be used for drying at night and in cloudy weather. The air passes through the solar collector, heats up and is drawn by a fan into the drying area, where it drawn through fruits, vegetables and other drying products located on the trays. Photovoltaic panel with a power of 10 watts provides fan operation.

Figure 11 Solar dryers



Handover of the SD-10 dryer to one of the regional schools with the support of Mercy Corps in the Kyrgyz Republic, 2020. Photo credit: Center for RE and EE development



Dryer SD-100, handed over to the women's cooperative in the village. Yasnaya Polyana, Issyk-Kul region, Kyrgyz Republic. Photo credit: Center for RE and EE development

²² Kurut is made from drained sour milk or yogurt by shaping it and letting it dry. The shapes can be one of many varieties, including small balls, strips, chunks.

This mobile convection dryer, weighing 43 kg, offering a drying chamber volume of 166 liters and a drying temperature of up to 60 °C, received a certificate of conformity with the Technical regulation of the KR and EAEU KG417 / 022.D.0009085 and is in strong demand among households and international organizations, such as Mercy Corps that provided such dryers to 135 regional schools in 2020.

Since there were frequent requests for dryers of larger capacity, in 2020 CREEED, within the framework of the project "Development energy access MSMEs"²³, used the quarantine time to develop a solar dryer SD-100, designed for the simultaneous drying of 2 different products using solar energy or backup electric heating. Solar convection dryer with a volume of 1.75 m³, is equipped with 12 fans, which are used for ensuring the flow of the heated air through the products.

The fans are powered by a 50W photovoltaic panel. Also, a 40 Ah battery is charged from the photovoltaic panel, which is used to ensure the operation of the fans even at night to prevent excessive humidity in the drying chambers. Back-up heating with a capacity of 3 kW is used to operate the dryer in cloudy weather or at nighttime.

The dryer weighs about 200 kilograms and is supplied complete with an installation and training service, usually for cooperatives or small farmers. SD-100 also received a certificate of compliance with the Technical regulation of the KR and EAEU KG417/022.D.0009085. Several more dryers were supplied to the farms of the Jalal-Abad and Chui regions in 2021.

2.2. Development of a new hydraulic ram pump (IE Rogozin)

IE Rogozin (former "Gidropuls" LLC) has been working on the creation and production of hydraulic ram pumps since 2004. Hydraulic ram pumps use the energy of an open water flow, converting it into a water hammer using a short shock tube and are used to raise water to irrigate elevated areas of rain fed lands, fill pools and reservoirs, and create pressure in the pipeline network during round-the-clock operation.

Figure 12 Improved hydraulic ram pump of Rogozin



Photo credit: IE Rogozin

The main consumers are farms, livestock complexes, construction projects, fish farms, water parks and allotments.

The performance of the hydraulic ram pump is ensured by the movement of water in the pipeline due to the difference in the static level (H) or high-speed pressure. The kinetic energy of the hydraulic shock during the vibration of the valve system in the automatic mode and the backpressure of the air "cushion" of the

²³ https://www.kg.undp.org/content/dam/kyrgyzstan/Publications/env-energy/2021/SME%20Access%20to%20Energy%20Project%20Narrative%20Report_EN.pdf

receiver raises the water upward. The output of the hydraulic ram pump line ranges from 0.7 to 31 liters per second.

During the quarantine and the state of emergency introduced in Bishkek, IE Rogozin was able to reorganize its work and did not stop working and found time to improve the design of hydraulic ram pumps. The result is a new model of hydraulic ram pumps, capable of generating more water pressure and raising water to a greater height than previous models, as shown in Figure 12²⁴.

2.3. Expansion in RES sector (Delta-TEK)

The need to search for new suppliers due to the COVID-19 crisis led Delta-TEK LLC to cooperate with the supplier of solar technologies from the Russian Federation, “Energon”.

Since 2008, Delta has been selling security systems: video cameras, intercoms, video recorders, and IT equipment: network equipment, computer peripheral equipment, devices and tools. The company already has established relationships with customers and accumulated effective experience in sales, which can be applied when working with addition of solar equipment to their product range.

Therefore, by the end of 2020, Delta has introduced into its range both package PV systems and components, supplied by the new partner, and has successfully started sales. Figure 13 demonstrates self-installed PV system by one of the first clients of Delta-TEK LLC.

Figure 13 Photovoltaic system with power of 3 kW in Novopavlovka village, Chui region of the Kyrgyz Republic



Photo credit: DELTA-Tek



Photo credit: DELTA-Tek

2.4. An effective business model for selling heat instead of heat pumps (Trikona LLC)

Due to the effective business model developed by the team of “Trikona” LLC, the company has incurred lower losses than others in the RE sector. Despite the fact that the company had to suspend the installation of heat pumps during the imposed restrictive measures on movement and work, “Trikona” LLC used this time to improve the technical characteristics of the product - a heat pump that uses low potential energy from groundwater.

In addition, due to the organization of remote work without the maintenance of an office even before the crisis, the company did not incur costs for downtime of office and production facilities. The business model of the company is based on the sale of heat energy to the population, produced by heat pumps, rather than

²⁴ https://youtu.be/QwzaPCWA_Ms

on equipment sales, which leads to a more regular income. "Trikona" LLC is the first successful example of an Energy service company (ESCO) using RES in the Kyrgyz Republic.

Figure 14 Smart glasses, illustrative photo²⁵



Further plans of the company include optimization of the equipment installation process using IT technologies. Augmented reality glasses, example of which is shown in Figure 14, in conjunction with the processing of streaming video and artificial intelligence will be used to control the quality of the assembly and connection of equipment, as well as assist staff in eliminating mistakes.

2.5 Using financial and consultancy assistance for the construction of biogas plant (IE Zhorojev/Fluid)

Despite the crisis, individual entrepreneur Zhorojev decided to install a biogas plant for processing waste from 50 heads of cattle, for which he turned to the Public Foundation "Fluid". MSMEs have been able to make good use of major financial assistance programmes for renewable energy installations operating in Kyrgyzstan - KyrSEFF and the EBRD's Assistance to Small Business Program. The installation of equipment amounted to about 23.5 thousand US dollars, and the EBRD ASB Small Business Development Group has provided financial assistance by covering 75% of the consulting services costs for the construction of the biogas plant, and a local commercial bank provided a loan with a grant to repay of interest payments through the KyrSEFF program).

²⁵ Photo credit: <https://artlabs.ai/blog/the-best-smart-glasses-and-ar-specs-of-2021/>

Figure 15 Biogas plant of IE Zhorojev and cafe Texas, where biogas is used



Photo credit: Center for RE and EE development

Photo credit: Center for RE and EE development

Launched at the height of the pandemic, in 2020, the biogas plant can process up to 3 tons of organic waste (animal manure with 89-92% moisture content) per day, producing up to 3 tons of biofertilizer per day, which is sufficient to fertilize 0.5 hectares of land. Second produced product – 90 m³ of biogas, sufficient for heating 300 m² of premises per day. Figure 15 presents a view at biogas digesters and Texas café interior, heated with biogas.

The biogas produced by the plant is used by Akbaraly Zhorojev for cooking and heating the interior of the cafe Texas, located on the road Osh-Isfana. “Due to our own production of biogas and bio fertilizers, energy costs can be reduced by more than 50%, and an increase in the yield capacity of a cherry garden ranged from 15% to 200%”, says Akbaraly.

Akbaraly plans to sell excess fertilizers on the local market, but for now provides it to local farmers free of charge, so that farmers can see the results of the use of biofertilizers on their crops.

2.6. Heat pump and solar water heating system for the “Monarch” health center

The Talipov family started their business in early 2008. They initially invested \$ 5,000 in wholesale and retail trade in textile products in the Dordoi market. At the beginning of 2020, they had four types of businesses: a guest house, a public bath, a cafe, and wholesale and retail trade of textile products.

When opening a health center, company decided to use a heat pump to heat the building and to use solar water heaters to heat the water, as the company wanted to be socially responsible and wants to operate an environmentally friendly business. Professional consultant to launch and commission energy efficient equipment was supported by EBRD ASB²⁶ small business support team.

Figure 16 Wellness Center "Monarch" and installed solar system



Photo credit: Wellness Center "Monarch"



Photo credit: EBRD ASB small business support team

The entrepreneur installed and launched a system consisting of a heat pump for heating and cooling of 250 m² of space and a solar system for heating 3 tons of water, shown in Figure 16. The total capacity of the equipment is 90 kilowatts. Company saved 65% off its electricity bill in 2020.

2.7. Temporary transition to another sphere of activity of individual entrepreneurs in Osh, Talas and Naryn regions of the Kyrgyz Republic

Many of the interviewed individual entrepreneurs that were supplying energy-efficient building materials in Osh, Talas and Naryn regions for 11-15 years, due to a sharp drop in income during the Covid-19 pandemic, urgently reoriented to:

- preparation and delivery of food made in home kitchens to customers
- provision of transport services by car and truck
- home production of milk and cream, as cattle breeding was already one of the additional activities

²⁶ See description in section 4. Practical measures, opportunities and recommendations for MSMEs supplying energy efficient products and providing renewable energy sources energy equipment on access to finance, markets and advanced technologies in the Kyrgyz Republic

The products were mainly handed over for sale through the bazaar. Delivery of orders was organized by own private transport.

Micro-entrepreneurs used WhatsApp and Telegram to spread information, communicate with customers and receive orders. Additional income from moving to other areas of activity helped to increase income during the COVID-19 pandemic, and to return to main business activities later.

4. Practical measures, opportunities and recommendations for MSMEs supplying energy efficient products and providing renewable energy equipment on access to finance, markets and advanced technologies in the Kyrgyz Republic.

1. "Financing of business entities" Programme²⁷

In order to restore and ensure economic and social stability, support business entities in the context of the spread of coronavirus, by the Resolution of the Government of the Kyrgyz Republic dated June 9, 2020 No. 315, the Programme "Financing of Business Entities" was approved, aimed at supporting soft loans through selected commercial banks of the following business sectors:

- Tourism
- Garment industry, textiles, clothing and footwear, leather and other leather products
- Pharmaceutical industry
- Freight transport, transport services
- Manufacture of rubber and plastic products, other mineral products
- Stimulating the activities of manufacturing and processing enterprises, including agro-industry, food production
- Manufacturing industry, with the exception of the mining industry, and other areas of economic activity

The Government of the Kyrgyz Republic provides loans to commercial banks and Micro financing organizations (MFOs), which provide loans to small entrepreneurs, MSMEs, large business entities at preferential interest rates in accordance with the Programme.

It is envisaged to refinance loans for industrial, processing and processing enterprises (no more than 30 million soms for per business entity) in case of a positive credit history until March 2020.

Basic requirements for obtaining a loan and characteristics of categories:

1. Resident of the Kyrgyz Republic
2. Individual entrepreneur, small, medium, large entrepreneur / legal entity properly registered with all state bodies of the Kyrgyz Republic, including the State Tax Service under the Government of the Kyrgyz Republic and the Social Fund of the Kyrgyz Republic

Banks participating in the Program:

1. CJSC "Kyrgyz-investment bank"
2. OJSC "RSK Bank"
3. OJSC "Bay-Tushum"bank"
4. OJSC "Optima bank"
5. OJSC "Kyrgyzstan commercial bank"
6. CJSC "Bank of Asia"

²⁷ <http://cbd.minijust.gov.kg/act/view/ru-ru/157637?cl=ru-ru>

7. OJSC "Aiyl bank"
8. OJSC "FinancKreditBank"
9. OJSC "Bakai bank"
10. OJSC "Halyk bank Kyrgyzstan"

Loans are provided to commercial banks and MFOs participating in the implementation of the Programme on conditions included in Table 6.

Table 6 «Financing of business entities» Programme participation conditions

№	Category	Rate of interest	Term and maximum loan amount for 1 subject
1.	For the acquisition, renewal, expansion and modernization of fixed assets	6% per annum	5 years Up to 30 million soms
2.	For the purchase of raw materials, components, spare parts	10 % per annum	3 years Up to 20 million soms
3.	For the acquisition, renewal, expansion and modernization of fixed assets, the purchase of goods, raw materials, components, spare parts, for the use of components of the digitalization of tax procedures (electronic invoices, software cash registers, labeling of goods)	4 % per annum	3 years Up to 10 million soms
4.	For refinancing loans to industrial and processing enterprises	11 % per annum	3 years Up to 20 million soms
5.	Microcredit for small entrepreneurs (not yet implemented)	14 % per annum	12 months Up to 150 thousand soms

The Chairman of the Cabinet of Ministers Ulukbek Maripov, by Decree No. 50 of June 30, 2021, amended the government decree "On approval of the Programme "Financing of Entrepreneurship Entities" of June 9, 2020 No. 315²⁸.

The previous resolution was specifying that funds received from entities to repay loans received under the Programme shall be accumulated in special account with the National Bank of the Kyrgyz Republic. The accumulated funds were used for further lending to business entities through selected commercial banks under the Program.

With accordance to changes to the Resolution²⁹, the funds accumulated on NBKR account are to be transferred to OJSC "Aiyl Bank", and are to be used for opening a separate credit line directed at leasing agricultural, processing equipment, sprinkler machines and equipment for drip irrigation, in the amount of 426,677,758 KGS (over million USD).

The "Aiyl Bank" is recommended to lease equipment to business entities on the following terms:

1. Lease term – up to 10 years
2. Interest rate - 4.5% per annum

²⁸ <https://www.gov.kg/ru/npa/s/3172>

²⁹ www.tazabek.kg/news:1735143?f=cp

3. Size of the initial contribution - at least 10% of the value of the leased asset in monetary terms;
4. collateral guarantee (leased asset)
5. in case of violation of the debt repayment schedule, the fines amounting to 0.01 percent of the amount of the overdue payment for each day of delay are applied, while the sum of the fines is not to exceed the principal amount of the lease.

2. Private and financial sector emergency support project

The project is being implemented with the support of the World Bank and the Asian Infrastructure Investment Bank³⁰. "The objectives of the project are to support micro, small and medium-sized enterprises (MSMEs) in overcoming the crisis caused by the pandemic, to help enterprises in the face of a slowing economic pace and to preserve jobs. The project will finance the provision of interest-free assistance on a repayable basis in the amount of 72 million USD (approximately 6 billion 84 million soms).

To achieve these goals, a selection was made, and agreements were signed with the following banks:

- "AiyI bank"
- "Bank of Asia"
- "FinansKreditBank"
- "Kyrgyzstan"
- "Capital-Bank of Central Asia"

In order to expand access of the population to financial assistance and increase the number of banks participating in the project, on October 1, 2020 agreements were also signed with:

- "Halyk bank Kyrgyzstan"
- "Dos-Kredobank"
- "Keremet bank"

Micro-entrepreneurs working with licenses³¹ will be allocated a total of 30 million USD (up to 100 thousand KGS (1,100 USD) for each recipient), small and medium-sized enterprises, legal entities and individuals paying taxes, will be financed in the amount of 42 million USD (up to 825 thousand KGS (9,700 USD) per recipient).

3. Sustainable Energy Financing Program in Kyrgyzstan (KyrSEFF)

The Kyrgyzstan Sustainable Energy Financing Facility (KyrSEFF) supports investment in energy efficient and renewable energy solutions in the Kyrgyz Republic. Working with the residential customers, small and medium-sized businesses and industrial sector entities, KyrSEFF aims to promote investment in modern technologies, equipment and materials that reduce energy consumption. This can be replacing old machinery and equipment with more modern and energy efficient alternatives or switching to new renewable energy sources for homes and businesses.

KyrSEFF has three key aspects:

- EBRD credit line of USD 20 million for partner financial institutions in the Kyrgyz Republic. These institutions then provide loans from the borrowed funds to homeowners and businesses

³⁰ <http://www.mineconom.gov.kg/ru/post/7336>

³¹ Specific tax regime in the KR, whereby micro entrepreneur pays a fixed amount of taxes by purchasing "licence" for specific activities

- Grants from 10 to 35 percent funded by the European Union Investment Fund for Central Asia
- Expert support to borrowers from local consultants in optimizing their energy consumption

KyrSEFF loans are available in KGS and USD. Loan amounts are flexible - from a few hundred to 1 million USD. Loans and investment incentives are available for specific energy efficiency practices for individual housing, apartment buildings, as well as for businesses of all sizes, including suppliers and installers of energy-efficient technologies. Various efficient energy saving technologies are subject to consideration, with selection based on the criteria set by the EBRD.

Investment incentives are provided after completion of installation, verification of costs and quality of installation. For small and medium-sized enterprises, loans up to USD 300,000 are available for short-term and long-term financing to assist in the modernization of equipment and premises. They are also eligible for investment incentives in the amount of 10 to 20 percent of the principal amount of the sub-loan, depending on the scale and complexity of the project. Projects for replacing windows with more energy efficient ones, heat recovery, switching from fossil fuel to renewable energy sources, using frequency converters for electric motors, fans and drives, improving lighting systems, insulating rooms, and others are eligible. Since every facility is unique, KyrSEFF also offers the opportunity to get a free energy efficiency assessment of the facility and equipment. If the borrower subsequently decides to implement the recommendations given to him, he will receive a 10 percent bonus in the amount of the grant on the total amount of the sub-loan requested from the bank. However, technical assistance provided through KyrSEFF is currently only offered to corporate clients.

More information on the types of projects that KyrSEFF can help implement through its financing and the application procedure is available at www.kyrseff.org.

4. EBRD Small business support group³² (ASB)

The EBRD Small Business Support Group (ASB) assists micro-, small and medium-sized enterprises in obtaining consulting services, using local consultants for this on a cost-sharing basis.

ASB helps businesses articulate their business development needs and understand how professional consultants can benefit them in improving their performance. The programme provides grants to businesses ranging from 65 to 75% of the net worth of each consulting project, with a project grant of up to EUR 10,000.

- Market analysis and marketing plan
- Enterprise development planning
- Preparation of feasibility studies
- Selection of partners: search for suppliers, investors, clients
- Reorganization/restructuring
- Computerization of accounting and management information systems
- Computer technologies in industry
- Engineering solutions: development of architectural plans and projects
- Quality management and certification: ISO 9000 - 27000, hazard analysis and critical control points (HACCP)
- Energy efficiency and the environment: conducting energy audits, clean development mechanism, renewable energy.

³² Bishkek office: +996 (312) 624023, Fax: +996 (312) 624024, Osh office: +996 (3222) 28048 Fax: +996 (3222) 57947, Karakol office: +996 (3922) 52050 Fax: +996 (3922) 52060, email: knowhowkyrgyzrepublic@ebrd.com, website: <https://www.ebrd.com/work-with-us/advice-for-small-businesses/kyrgyz-republic.html>

Enterprise selection criteria:

- Number of employees - up to 250 people
- Age of enterprise is at least 2 years
- Majority stake belongs to domestic private owners
- Banks, enterprises of the military-industrial complex, gambling business, tobacco and alcohol industries are not allowed to participate in the Programme
- Ability to pay 25% to 50% of the consulting project costs.

5. IFC HMF Kyrgyzstan

The main goal of the IFC HMF Kyrgyzstan project is to help people with low incomes get access to finance to improve their housing. To this end, the project, in partnership with several microcredit companies, has developed a loan product, within which borrowers receive not only financing, but also advice on construction technologies and options for housing improvement. About 30% of all loans issued are directed to improving the energy efficiency of households (house insulation, installation of a gas boiler, installation of plastic windows, etc.).

The product includes 3 non-financial components and is designed to fill existing gaps in improving the housing conditions of low-income households in rural areas. Types of work may include foundation construction, wall construction, wall insulation, plastic windows, roof construction, flooring, sanitary facilities, etc.

Component 1: Clear planning of the amount of building materials. Detailed estimate calculation on a construction calculator.

Component 2: Video tutorial describing how to properly carry out construction work. A detailed description of the technology, compliance with building codes and regulations, ensuring energy savings, etc.

Component 3: Reducing the cost of building materials. Coupon for discounts from 3 to 20% from suppliers - partners throughout the country.

To this day, the project partners have issued more than 25 thousand loans to households who were able to implement their plans to improve their housing.

The project partners are 8 microcredit companies in the Kyrgyz Republic (Bailyk finance, Elet capital, Amanat credit, Bir top, Oxus, Universal credit, Incom and Arysh capital). All partner credit and financial institutions have fixed energy-efficient components of IFC HMF in the passport of the loan product for "construction and repair". At the moment, 2 partners work on "green" loans (RES): Amanat credit and Bailyk finance.

According to the project, year 2020 turned out to be difficult for the lending sector in Kyrgyzstan due to the pandemic, as crisis has had a significant impact on economic activity in the country as a whole, as well as throughout the world. During this period, many financial and credit entities were forced to terminate the activities of some of their branches in the country. In particular, the number of loans for construction and repairs has decreased, and the restrictions of the pandemic have led to an increase in prices for building materials, which are mainly supplied to the Kyrgyz Republic from neighboring countries.

But as the data for 2021 show, the pace of development of the country financial and credit sector is gaining momentum again, because lending has been and remains an integral part of development for many residents. Number of housing loans, issued in 2019 was 7,250, and in 2020 only 6,545 (9.7% decrease). As for EE loans, there were 1,001 in 2019 and 1,989 in 2020 (increase by 98.7%). However, the growth in EE loans is associated with the appearance of new financial EE products in partner credit and financial institutions.

There is a prospect of accelerated development of the energy efficiency topic in general, production of EE equipment, provision of services due to the aggravating situation in the country's energy sector. Increasingly, people are forced to face the need to have alternative sources of energy for heating and lighting. Government as a whole, in recent years, has also been more actively raising questions about the need to accelerate the development of RES and EE in general.

6. Project “Promoting Energy Efficiency and Renewable Energy Production in the Community Based Tourism Sector in Central Asia” (SET³³)

The main objective of the project: Reducing the carbon emissions of the community tourism sector in Central Asia by supporting MSMEs in the renewable energy, energy efficiency and community-based tourism sectors in applying sustainable consumption and production.

- Facilitates the transition of Kyrgyzstan, Uzbekistan and Tajikistan to low carbon economies by adapting and implementing new resource and energy efficiency solutions by technology providers and facilitating access to green finance to scale up these new technologies and SPC solutions in the tourism sector
- Develops a green hostel model by implementing SPC practices such as local environmental standards, eco-certification scheme, and value chain approach and resource efficiency

Specific goals include:

- Facilitate the implementation of SPC practices by MSMEs in the CBT sector through linkages with producers in the energy efficiency / renewable energy sectors, as well as with financial intermediaries
- Expand political dialogue between sector stakeholders to create more conducive environment for EE/RES development
- Promote sustainable CBT initiatives at the national, regional and international levels and raise consumer awareness of sustainable tourism in Central Asia.

7. Green Tour³⁴

Project objectives: Integration of environmental services and products into the tourism supply chain; developing waste management approaches for hotels, restaurants and other places, in particular with regard to food waste and plastic reduction standards. Facilitating the creation of new financial schemes and expanding access to finance for MSMEs.

Project objectives:

- Strengthening the capacity of tourism associations to provide CSR advisory services
- Integrate SPC practices, environmental services and products into the supply chain of tour operators
- Supporting 20+ MSMEs to access green finance
- Integrate SPC principles into Kyrgyz and Central Asian policies

Way forward

- Strengthening the capacity of tourism associations to provide CSR advisory services
- Kyrgyz tour operators and supply chain integrate SPC practices

³³ <https://www.switch-asia.eu/project/promoting-energy-efficiency-and-renewable-energy-production-in-the-community-based-tourism-sector-in-central-asia/>

³⁴ <https://www.switch-asia.eu/project/green-tour/>

- Green finance scheme established to support over 20 MSMEs
- Increasing the number of green services and products in the supply chain
- SPC has become an integral part of the policy of Kyrgyzstan and Central Asia

8. PERETO project

The project "Promoting Energy and Resource Efficiency in the Tourism Industry of Kyrgyzstan" (PERETO) is being implemented by the American University of Central Asia (AUCA) in a consortium with partner organizations: UNISON Group (Kyrgyzstan), Technopolis Group (Belgium), Collaborating Center on Sustainable Consumption and Production - CSCP (Germany).

The project is designed for four years - from 2020 to 2024, with funding from the European Union under the SWITCH-Asia program. The project is supported by the Delegation of the European Union to the Kyrgyz Republic in cooperation with the Ministry of Economy and Finance, and the Department of Tourism in the Kyrgyz Republic.

The goal of the project is to promote energy security and sustainable growth by promoting sustainable production and consumption (SPC) and energy and resource efficiency (ERE) practices among small and medium-sized enterprises (MSMEs) in the tourism sector of Kyrgyzstan.

Project objectives:

- raising awareness among consumers and MSMEs in the tourism sector about RE and EE
- building the capacity and technical readiness of tourism MSMEs to implement RE and EE measures
- promotion of private sector initiatives aimed at developing and achieving the goals of a green economy in the Kyrgyz Republic
- development of new green finance products tailored to the needs of MSMEs in the tourism sector
- Promoting national dialogue and policy development on SCP and ERE implementation

Expected results:

- 300 small and medium enterprises in the tourism sector are informed, provided with technical support for the implementation of SCP practices and ERE solutions
- improving access to green finance to implement ERE solutions for small and medium-sized enterprises in the restaurant and hotel sector
- 50 SMEs in the tourism industry show increased concern for sustainability through voluntary EE certification, supported by a project in partnership with business associations
- sectoral ministries are equipped with tools to promote RE and EE practices
- consumers (tourists and visitors to MSMEs) are aware of RE and EE in the tourism sector
- Reduction of energy, material and other costs of resources of MSMEs

5. Guidelines for MSMEs delivering energy efficient products and providing renewable energy equipment on access to finance, markets and advanced technologies in Kyrgyzstan

Energy efficiency and renewable energy sources can play a vital role in the recovery of the Kyrgyz economy after COVID-19. The introduction of energy efficiency and renewable energy measures can dramatically increase the economic competitiveness of companies and reduce their operating costs. The best practices and best practices presented in this study prove that energy efficient products and renewable energies are viable options for dealing with the economic crisis caused by the pandemic. The analysis of the results of the

study led to the formulation of the following set of guidelines that will help MSMEs gain access to markets, finance and advanced technologies:

- Increase the use of existing government programmes, such as the “Entrepreneurship Funding” Programme. This programme provides a good opportunity for MSMEs to access finance and improve their services.
- Increase the use of opportunities provided by international renewable energy and energy efficiency programmes such as the Private and Financial Sector Emergency Support Project, KyrSEFF programs and the EBRD's ASB Business Support Group, IFC's Energy Efficient Housing Microfinance Project. In a situation created by the crisis, it is possible to use financial support both for MSMEs themselves for research and development of innovative EE and RE equipment and for their clients to reduce the cost of services.
- Collaborate with projects that develop demand for MSME services in the field of renewable energy and energy efficiency, such as SET, PERETO, Green Tour, to provide information to clients about the benefits of products and services offered by MSMEs.
- Form partnerships or associations to facilitate access to supplies, resources and markets, and to gain the opportunity to influence legislative initiatives. Due to the small size of MSMEs, the establishment of partnerships and the creation of associations is absolutely necessary to increase the competitiveness of companies and combat the consequences of the pandemic, inform about the possibilities of state support, and protect the interests of MSMEs in the field of renewable energy and energy efficiency.
- Follow the resources that publish details of open tenders, grants or projects, related to development of RES and EE sector and female entrepreneurship, such as sites <http://www.procurement.kg>, <http://www.tenders.kg>.
- Increase your online presence (e-commerce, online tech support, social media presence). An increase in online presence can increase customer flow even during a pandemic.
- Organize professional training for employees or provide online training for students and other professionals to develop their knowledge and experience during a crisis. Consider developing and offering state-subsidized vocational education for EE and RES installers. This can be done by developing training programs and approving them with Ministry of Education.
- Develop a blueprint for possible practical and theoretical research needed to improve your products and services. This plan can be implemented outside the crisis, but it can be the main activity during periods of inability to provide other services.
- Follow the development of new technologies, such as augmented reality equipment in conjunction with video streaming and artificial intelligence, to provide quality installation and repair services.
- Temporarily reorient MSMEs to services that are in demand, which can help cope with the crisis. There are examples of re-profiling EE and RE MSMEs into other areas of activity and vice versa - for projects on energy efficiency and renewable energy equipment.
- Consider outsourcing and/or sharing (i.e. clustering) some basic services (e.g. financial/marketing/shipping/installation).
- Explore the possibilities of attracting government contracts for the implementation of stable and funded projects, register on the government online portal³⁵ and check tender notices regularly.
- Develop a procurement strategy for the company and/or cluster, foreseeing multiple supplier options and logistic paths to ensure that the necessary stocks are available in advance to ensure smooth operations.

³⁵ <http://zakupki.gov.kg/popp/home.xhtml>

- Implement circular economy and resource efficiency principles in your manufacturing processes to optimize operating costs.

6. Recommendations to the Cabinet of Ministers of the Kyrgyz Republic on creation of an enabling environment through appropriate policies and legislation for MSME to stimulate delivery of energy efficient products and services and provision of renewable energy equipment

The purpose of the recommendations based on the analysis of data and research in the report is to enable the Cabinet of Ministers of the Kyrgyz Republic to introduce appropriate policies and legislation to incentivize MSMEs providing energy efficient products and services, as well as equipment and services for the use of RES.

1. Clear instructions should be prepared for companies on the available support, for example, how to access various financial instruments, who to contact with questions, which national authorities, programmes, donors are involved in disbursing funds, what is the role of commercial banks and what they are, obligations of all sides, etc.
2. Clear guidance should be developed on available measures and solutions that companies can implement to address the crisis and the short- and long-term impact of the pandemic. This guidance should contain not only government measures, but also other support instruments, such as international donor organizations, private initiatives, internal company measures, etc.
3. Protocols and channels (through business associations and chambers of commerce) for the provision of information and support services to address specific business problems (hotlines) should be envisaged.
4. In existing programmes for MSMEs, the government should pay special attention to EE and RES products and services, since the use of these technologies and products can have a positive impact on recovery from COVID-19, strengthening and competitiveness of MSMEs working in various fields.
5. An important factor for the business environment now is the preservation of a stable political situation and the retention of the legal framework. It is necessary to determine the specific goals of the country in the field of energy, RES and energy efficiency, to complete development of strategic documents, legislation and by-laws that establish the rules of the game and incentive measures both for suppliers of equipment and energy from RES, energy-efficient equipment, and for energy consumers introducing RES and EE technologies.
6. Investments in EE and RES products and services should be encouraged and subsidized, resulting in energy and cost savings in the long term. The EE / RES market is always driven by the companies that are the first to adopt new technologies, and they bear the burden of the “first investments”.
7. Introduction of tax cuts on energy efficient and renewable energy equipment and services. Reducing taxes will increase demand and use of such equipment and services. This helps set up a favorable market environment for these products, as well as helps companies improve their competitiveness and reduce energy costs. Although the Tax Code of the Kyrgyz Republic provides for VAT exemption for imported RES and EE equipment, a specific list of Harmonized System (HS) codes approved in 2021 is very limited.
8. It is recommended to provide financial support in the form of grants and low-interest loans for MSMEs working on delivery and implementation of RES and EE technologies to promote green recovery, and special support for enterprises employing women.

9. It is recommended to revise and adjust public procurement procedures and stimulate the purchase of EE and RES products from local suppliers/manufacturers. The government is one of the largest consumers. By choosing EE and RES products and advanced technologies, it makes an important contribution to sustainable consumption and production. In this regard, public procurement should give an advantage to EE and RES products in tender procedures.
10. Creation of enabling conditions for implementation of public-private partnership (PPP) projects will benefit both companies and government and, ultimately, the general public. In a situation where many companies have problems with a decrease in demand, this will stimulate growth of trading activity.
11. The creation of EE and RES clusters by MSMEs should be supported. For small businesses and start-ups, being in a cluster next to competitors and related industries can provide opportunities to access markets, build supply chain networks, get better access to information, empower them to solve common problems, and jointly develop strategies and plans to overcome them.
12. Support must be provided to adapt to and mitigate the effects of the crisis. For example, the government could create an enabling environment for startups – new ventures that focus on opportunities arising from changes in the work environment (online business, medical research, etc.) that would stimulate employment, and, specifically, employment of women.
13. There is a need to improve the delivery of public services, which need to be digitized to ensure safe health practices. For example, introduction of digital document flow between government agencies, municipal enterprises and the business community related to reporting and obtaining certificates and permits would decrease the need for in-person contact with civil servants. The list of services subject to digitalization in the opinion of the respondents of the ACC KR survey is provided in Annex 2.

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Annex 1. Questionnaire on the impact of COVID-19 on micro, small and medium sized enterprises in Kyrgyzstan in the supply of energy efficient products and provision of equipment for renewable energy sources

MSMEs name						
Location (city and country)						
The form of MSMEs		<i>IE/Ltd/PF/other</i>				
Year of foundation						
Assessment of impact on MSMEs products/services during COVID-19						
Changes in employment						
#	Questions	Answer format	Possible answers			
1.	Number of employees before the COVID-2019-2020 crisis	number	Up to 7	Up to 15	Up to 50	More than 50
2.	Current number of employees	number	Up to 7	Up to 15	Up to 50	More than 50
3.	Number of female employees before the COVID-2019-2020 crisis	number	%	%	%	%
4.	Current number of female employees	number	%	%	%	%
5.	Do you have employees who have had COVID-19?	number	%	%	%	%
Production and services						
6.	Key products/services before the COVID-2019-2020 pandemic	Specify (out of 23 categories)/text				
7.	Have you ever switched to remote mode?	Yes/no				
8.	Have you developed additional products/services, while working remotely during the 2019-2020 pandemic?	Yes/no/text				
9.	Did you have to give up some products/services after the COVID 2019-2020 pandemic crisis?	Yes/no/text				
Supply chain						
10.	How did the COVID-2019-2020 pandemic affect the supply of materials, etc. for your production/service?	Specify/text	Delays in deliveries	Impossibility of supplies	Increase in the cost of supplies	Other (text)

11.	Did you have to end communication due to COVID-2019-2020 with some partners in the country or abroad?	Yes/no				
12.	Have you found new partners in the country as a result of the changes caused by the pandemic in 2019-2020?	Specify	Found	Looking for	Planning	No
13.	Have you found, or looking for or plan to find new partners abroad?	Specify	Found	Looking for	Planning	No
14.	Other aspects of the impact of the COVID-2019-2020 crisis on the supply chain?	Text				
Adaptive and mitigating measures taken by the MSMEs during the COVID-19 crisis						
Adaptive measures taken (administrative and / or technical measures)						
15.	Did you have debt service obligation/microloans prior to the 2019 COVID-19 crisis?	Specify	Loan	microloan	Private loan	no
16.	Have you had any difficulties with paying off loans, microcredits or borrowings?	Yes/no				
17.	Had your bank, microcredit organization or borrower provided any support in repaying loans (deferral, lower interest rates, etc.)?	Specify	no	Yes deferred payments	Yes, interest rate reduction	Others (text)
18.	Sold or stopped using of property (real estate, etc.) after the COVID-2019-2020 crisis?	Specify	Yes, property	Yes, equipment	Yes, transport	No
19.	Did you have to reduce the area of the rented premises or stopped using the lease of real estate after the COVID crisis in 2019-2020?	Yes/No				
20.	Did you have to fire employees due to financial problems in the company created by COVID-2019-2020?	Yes/No				
21.	Did you have to fire female employees due to financial problems in the company created	Yes/No				

	by COVID-2019-2020?					
22.	Did you have to cut employees' salaries due to problems in the company created by COVID-2019-2020?	%				
23.	Did you have to cut female employees' salaries due to problems in the company created by COVID-2019-2020?	%				
24.	Did you have to reduce the employment (paid working hours) of employees due to problems in the company created by COVID-2019-2020?	%				
25.	Did you have to reduce the employment (paid working hours) of female employees due to problems in the company created by COVID-2019-2020?	%				
26.	Had you attracted an additional loan for organizing remote work?	Yes/No				
27.	Did employees leave for COVID-19-related reasons?	Yes/No				
28.	Are you planning to change/transform your field of activity due to the consequences of the pandemic?	Yes/No/text				
Achieved financial results (sales, production, market share, etc.)						
29.	Turnover per year before the COVID-2019-2020 crisis	\$ thousands	Up to 3	Up to 6	Up to 25	More than 25
30.	Was there a decrease or increase in turnover during the COVID-2019-2020 crisis?	Decrease/ Increase %				
31.	Had the volume of goods / services produced by the company changed as a result of the pandemic in 2019-2020?	Yes/No/text				
	Have you taken the following measures:					
32.	Have you expanded your communication with investors, customers and partners through social media, providing technical	Yes/No				

	information about products and services in 2019-2020?					
33.	Which social networks and channels did you use?	Specify (from 7 social networks)				
34.	Have you introduced online sales?	Yes/No				
35.	Have you introduced products or services to combat and recover from COVID-19?	Yes/No/text				
36.	Have you moved into the service sector by retraining your employees or diversifying your activities in projects where remote assistance can be provided?	Yes/No/text				
37.	Did you provide paid online training?	Yes/No/text				
38.	Did you attract funds from donor agencies and other sources for R&D on innovative and in-demand technical solutions?	Yes/No/text				
39.	Have you tried to find new suppliers and customers using Associations, CClIs?	Yes/No				
40.	Other examples of new products and services that could help your colleagues in the RES and EE industry?	Yes/No/text				
Financial assistance provided by the government or received from other sources						
41.	Did the state provide you with financial assistance - loans, tax cuts, subsidies or other assistance in 2019-2020?	Specify /text	Yes, soft loans	Yes, tax cuts	Yes, subsidies	No
42.	Did international organizations help you?	Yes/No/text				
43.	How the support has affected the company's operations after the pandemic crisis?	Specify	Yes, fully eliminated the	Eliminated partially	Hasn't influenced in any way	Did not get support
44.	What advice would you give to the Government to support business?	text				
45.	How could we invite you to the presentation of the research results?	Specify	By e-mail	By phone	By WhatsApp	By Telegram

Annex 2. The list of services subject to digitalization, according to the respondents of the ACC KR (AmCham) survey

Digitalization³⁶

Entrepreneurs are seeing a separate set of tasks for solving business problems in improving the provision of public services that need to be digitized to ensure sanitary safety and adapt the business model to the current situation.

As part of the activities of the Tax Service, there is a list of at least seven types of services that need to be digitalized:

1. Providing tax reporting
2. Registration of a legal entity
3. Obtaining and renewing a patent and insurance policy
4. Issuance of certificates online
5. Optimization of the work of the "taxpayer's office"
6. Submission of tax statement
7. Online training of individual entrepreneurs on passing reports and improving literacy in the field of taxation of citizens

Another task is the introduction of digital document circulation between state bodies, municipal enterprises and the business community. A minimum of six services are subject to digitalization in this direction:

1. Application and registration services
2. Licensing and issuance of permits on a notification basis
3. Receipt of certificates, applications and/or other documents in all bodies (ministries) in electronic form
4. Acceptance of applications for registration certificates, criminal records, health status
5. Obtaining identity documents
6. Implementation of a single service access point (universal account)

Digitalization is also important in many other areas of interaction between the state and business.

In the State Registration Service, you can digitalize:

1. Property registration services
2. Issuance/receipt of government certificates, licenses and other documents
3. Processing of personal documents
4. Verification of ownership rights

In the Custom service:

1. Digitization of customs procedures during import
2. Customs/border control system and border crossing procedure

³⁶ <https://economist.kg/novosti/ekonomika/2021/05/26/biznes-ne-vozstanovilsya-posle-pandemii-ot-gosudarstva-po-prezhnemu-trebuetsya-podderzhka-analiz/>

In other areas:

1. Healthcare business licensing
2. Availability of electronic digital signatures for receiving remote services of the Social Fund
3. Services of the State Agency for Architecture, Construction and Housing and Communal Services: documentation for the construction and reconstruction of facilities; obtaining permits.
4. Providing the National Statistical Committee with statistical reports from companies
5. Public notary services
6. Services of the State Institution "Unaa" and the State Agency for Land Resources
7. Services of the Ministry of Justice (registration of a legal entity)
8. Litigation in civil proceedings
9. Regulation of e-commerce and cashless payments
10. Banking sector digitalization
11. Translation of checks into a digital field
12. Services of Public Service Centers (PSC)