**INVESTMENT PROPOSAL**

**of the project «Establishing the production of compressors for household appliances»**

**1. The name of the project** - «Establishing the production of compressors for household appliances».

**2. General information about the project initiator:** The «Uzeltexsanoat» Association was formed on the basis of the «Uzeltexsanoat» Joint-Stock Company in accordance with the Resolution of the President of the Republic of Uzbekistan dated January 4, 2019, No.PR-4090 and currently unites large enterprises of the republic's electro-technical industry.

The main objectives of the «Uzeltexsanoat» Association are to develop a strategy for the sustainable development of the electro-technical industry, implement comprehensive measures to promote the development of new types of electro-technical products to saturate the domestic market and expand its export geography, as well as attract investment, primarily foreign, for the development of high-tech industries for the production of electro-technical products.

The member enterprises of the Association specialize in four main areas: production of cable and wire products, production of industrial and technical products (low and high voltage equipment such as transformers, substations, switchboards, etc.), production of household appliances and electronics (TVs, refrigerators, air conditioners, lighting, semiconductor devices, etc.) and services.

Volumes by the end of 2019:

- production and services rendered - 7.9 trillion sums (890.8 million US dollars.);

- export - 250.3 million US dollars.

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**3. Information about the enterprise on the basis of which it is planned to implement the project (if needed):** This project is proposed for implementation in the territory of the Republic of Uzbekistan, including the FEZs of the republic. Search, if necessary, and identification of local partners with production experience that are part of the «Uzeltexsanoat» Association.

**4. Information about the project:** Production of the following is envisaged.

|  |  |  |
| --- | --- | --- |
| **№** | **Name** | **Forecasted production volume  for the first year (thousand units)** |
| 1. | Compressors for household refrigerators | 350.0 |
| Compressors for commercial refrigerators | 60.0 |
| Compressors for air conditioners | 200.0 |
| **Total:** | **610.0** |

**4.1. Marketing:**

• The market of household air conditioners, refrigerators and freezers, where the compressor is an integral part, is one of the main sectors of the consumer goods market. The analysis of the market research of the Republic of Uzbekistan shows that in 2018 total volume of imports of compressors for household appliances in the republic amounted to 709.4 thousand units totaling 27.6 million US dollars, and by the end of 2019 974.4 thousand units of compressors for household appliances were imported totaling 38.9 million US dollars.

Currently, the «Uzeltexsanoat» Association is carrying out work on the implementation   
of new investment projects aimed at developing the production of household refrigerators with   
project capacity of 1.0 million units, which will increase the demand for compressors for household appliances in the republic.

The local market of Uzbekistan, as well as neighboring states of Central Asia and the CIS countries are considered as the main markets for the sale of products.

• There are no compressor manufacturers in Uzbekistan at the moment.

**4.2. Production:**

• A compressor is a complex energy mechanism for compressing a gaseous substance, creating an air stream under high pressure. Widely used in everyday life and in production. The basic principle of action is to convert the mechanical energy of the engine into the energy of the air or gas flow. The final pressure for all devices depends on the engine power indicator and the design of the air injection mechanism. Innovative technologies used in industry have gradually been introduced into the design of household appliances.

* A household compressor is classified based on the principle of compression of air masses and their subsequent removal (pumping).

**There are two types:**

1. Volumetric compressor.

2. Dynamic or paddle.

**Volume**

In the unit, the compressed gas moves in portions, depending on the device and the principle of operation of a particular mechanism, forcing. The mechanism installed in the compression chamber may be a piston, rotary, cam, plate-rotor, membrane or spiral. In the design of a household compressor, membrane or piston mechanisms are used.

**Membrane**

The main element of the device by which the process of compression and movement of air is carried out is a membrane. It can be made of iron or rubber.

* The household compressor consists of:

1. The engine.

2. The receiver.

3. Pressure gauge.

4. Air hose.

Engine power is a key indicator of compressor performance. The receiver is a vessel for accumulating air volume and adjusting its flow rate, pulsations when the pressure changes. The pressure gauge is installed on the air hose or on the body of the product. Informs the user about the pressure in the compressor.

* The demand for raw materials and components:

import - steel, drive belts, filters, pistons.

local - copper tubes, wires, packaging materials, etc.

Number of new jobs to be created (people): Administrative – 25 people,   
Technical – 80 people.

**4.3. Construction, reconstruction or modernization:** New construction;

The required land area will be determined by the selection of equipment.

Requirements for providing the facility with industrial infrastructure:

- railway line - required;

- water supply - required;

- power supply - required;

- gas supply - required;

- sewerage - required.

**4.4. Financing (Estimated project cost):**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **№** | **Project cost, including** | **Unit** | **Cost** | **Sources of financing** | | |
| **Own funds** | **Direct investments** | **Loans of commercial banks** |
| 1 | Construction and installation work | million  USD | 2.0 | Will be determined based on the results of negotiations with potential investors | | |
| 2 | Equipment | million  USD | 17.0 | Will be determined based on the results of negotiations with potential investors | | |
| 3 | Working Capital | million  USD | 8.8 | Will be determined based on the results of negotiations with potential investors | | |
| **Total:** | | **million**  **USD million**  **Doll.**  **million**  **Doll..**  **million**  **Doll.лн.**  **долл.** | **27.8** | Will be determined based on the results of negotiations with potential investors | | |

The estimated construction period is from 12 to 18 months.

**5. Expected results from the project:** Volume of production and revenue:

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Name of products** | **1 year** | | **2 year** | | **3 year** | | **4 year** | |
| **quantity (thousand pcs)** | **amount (million dollars)** | **quantity (thousand pcs)** | **amount (million dollars)** | **quantity (thousand pcs)** | **amount (million dollars)** | **quantity (thousand pcs)** | **amount (million dollars)** |
| Compressor for domestic refrigerators | 350.0 | 18.6 | 400.0 | 21.3 | 450.0 | 23.9 | 550.0 | 29.3 |
| Compressor for commercial refrigerators | 60.0 | 4.1 | 80.0 | 5.5 | 100.0 | 6.9 | 130.0 | 8.9 |
| Air conditioning compressor | 200.0 | 13.4 | 250.0 | 16.7 | 300.0 | 20.1 | 340.0 | 22.8 |
| **Total:** | **610.0** | **36.1** | **730.0** | **43.5** | **850.0** | **50.9** | **1 020.0** | **61.0** |

Estimated unit price:

compressor for domestic refrigerators - 53.3 US dollars;

compressor for commercial refrigerators - 69.1 US dollars;

compressor for air conditioners - 67.1 US dollars.

The payback period of the project is 5 years.

**6. Status of development and examination of project documentation.**

The process of development and examination of the project documentation will begin after negotiations with a potential investor on cooperation.