



# MANUFACTURING OF QUARTZ GLASS PRODUCTS

#### ПРОЕКТ

There is provided a project on building quartz glass products manufacturing plant.

Due to the following prerequisites the project seems to be high-opportunity:

- Quartz glass world market totals USD 2 bn. The main consuming industries of quartz glass products are electronics and medicine.
- World electronics market is expected to reach **USD 12,6 mn sq in** by 2015 with annual average increase of **9%**.
- CIS market of high-quality ampoules totals around **1600 bn** items. Annual average growth rate over 2009-2012 is **19%**.
- Developed mining industry in Belarus, research and raw materials (the volume of identified quartz sand deposits is 175 mn t) base.
- Skilled labor and experience in implementation of projects in quartz industry.
- Russian imports of quartz glass products total USD 39,2 mn, annual average growth rate 18%. Belarus imports quartz glass products to the value of **USD 3,5 mn**, annual average growth rate is **23%**.
- Capital expenditures for launching guartz glass products manufacturing plant are estimated at **USD 50-80 mn**, payback period is **5-6 years**.

#### **MARKETS**

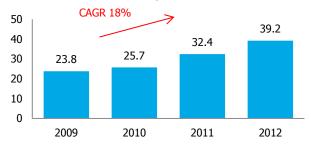
#### **Customs Union market:**

In 2012 Russia imported guartz glass products to the value of USD 39,2 mn, annual average growth rate of imports over 2009-2012 is **18%.** 

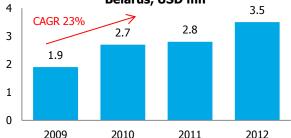
#### Internal market of Belarus:

In 2012 Belarus imported quartz glass products to the value of **USD 3,5 mn**, annual average growth rate is **23%**.

#### Imports of quartz glass products in Russia, USD mn



#### Imports of quartz glass products in Belarus, USD mn 3.5 **CAGR 23%**





## MARKET OPPORTUNITIES

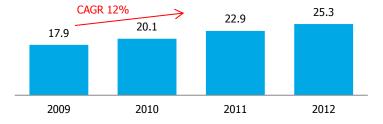
#### Global opportunities:

- World quartz glass market totals **USD 2 bn**.
- The main consuming industries of quartz glass products are **electronics** and **medicine**. World electronics market is expected to reach **USD 12,6 mn sq in** by 2015 with annual average increase of **9%**.

#### **Local opportunities:**

- Necessity of importing quartz glass products is conditioned by lower quality of silicon produced in Russia and inability of applying it in electronics industry (share of imported silicon is about **30%**).
- In spite of developed pharmaceutical industry, there is no production of medical glass (ampoules, vials) in Belarus. Imports of ampoules in Belarus totaled **USD 5 mn**, annual average growth rate over 2009-2012 **24%**.
- Ampouled and vialed pharmaceuticals output in Belarus has increased by **18%** since 2009 and totaled **377 thou items** in 2012. Annual average growth rate is **6%**.
- In 2012 Russia imported ampoules to the value of almost **USD 16 mn**, annual average growth rate of imports over 2009-2012 amounted to **8%**.
- Annual average growth of Russia's pharmaceutical market over 2009-2012 was **12%**, the market volume exceeds **USD 25 bn**.
- CIS market of high-quality ampoules totals around **1600 bn** items. Annual average growth rate over 2009-2012 is **19%**.

#### Pharmaceutical market in Russia, USD bn

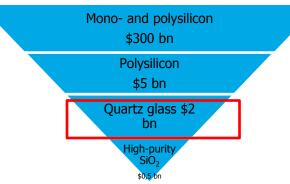


# INVESTMENT OPPORTUNITIES

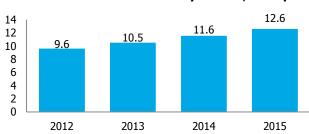
- Capex for the project implementation might total USD 50-80 mn.
- Payback period is about 5-6 years.
- IRR varies within 5-18%.

### POTENTIAL INVESTORS

- **Strategic investors** companies with technologies and experience in production of quartz glass products.
- **Forward integration** major players on microelectronics and pharmaceutical markets (medical holdings).



#### World electronics industry market, mn sq in



#### Imports of ampoules in Belarus, USD mn



# Ampouled and vialed pharmaceuticals output in Belarus , thou items



Imports of ampoules in Russia, USD mn

