



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 quartz glass products manufacturing plant are estimated at **USD 50-80 mn**, payback period is **5-6 years**.

MARKETS

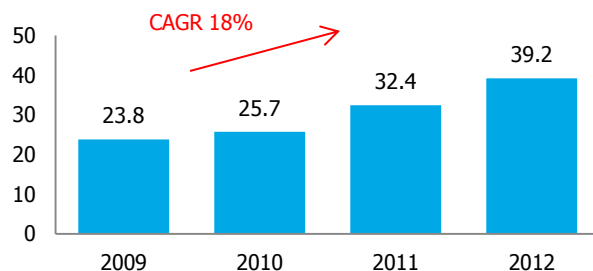
Customs Union market:

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

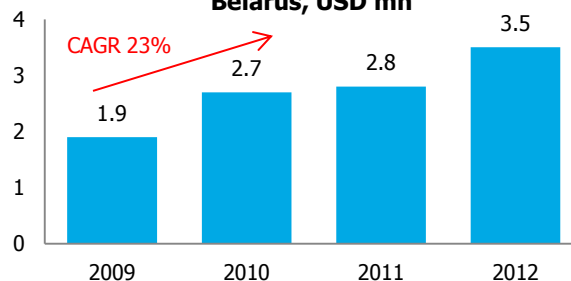
Internal market of Belarus:

- 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



MARKET OPPORTUNITIES

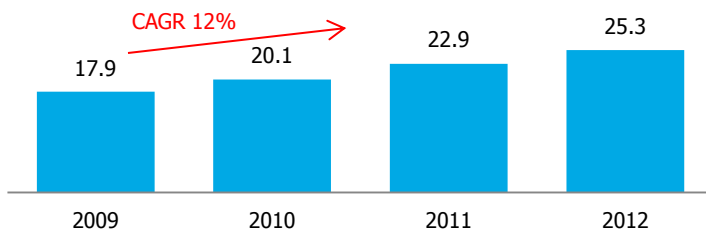
Global opportunities:

- 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 vialled 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

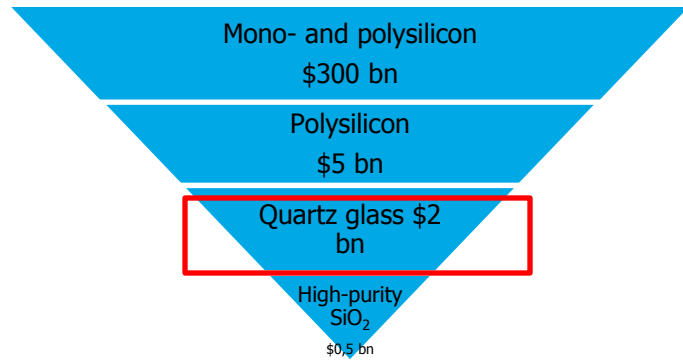


INVESTMENT OPPORTUNITIES

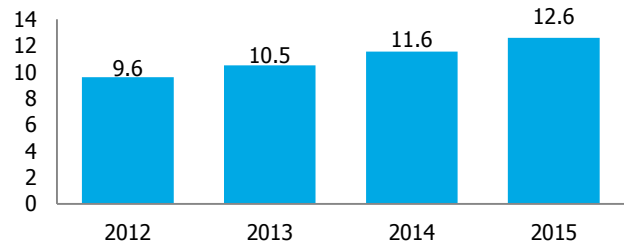
- Capex for the project implementation might total **USD 50-80 mn**.
- Payback period is about **5-6 years**.
- IRR varies within **5-18%**.

POTENTIAL INVESTORS

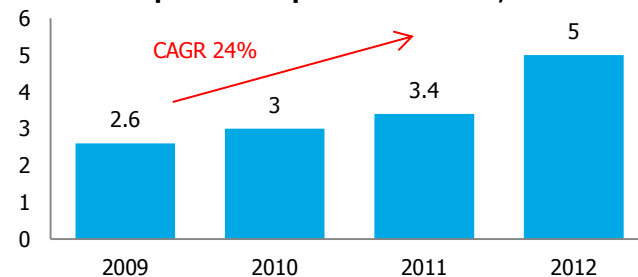
- Strategic investors** – companies with technologies and experience in production of quartz glass products.
- Forward integration** – major players on microelectronics and pharmaceutical markets (medical holdings).



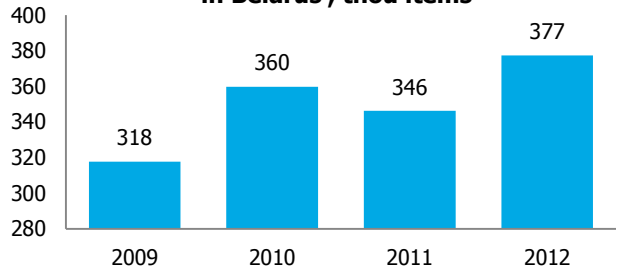
World electronics industry market, mn sq in



Imports of ampoules in Belarus, USD mn



Ampouled and vialled pharmaceuticals output in Belarus, thou items



Imports of ampoules in Russia, USD mn

