



MANUFACTURING OF GLASS FIBER COMPOSITES

PROJECT

There is provided a project **on launching production of glass fiber composites**.

This is a high opportunity project due to the following reasons:

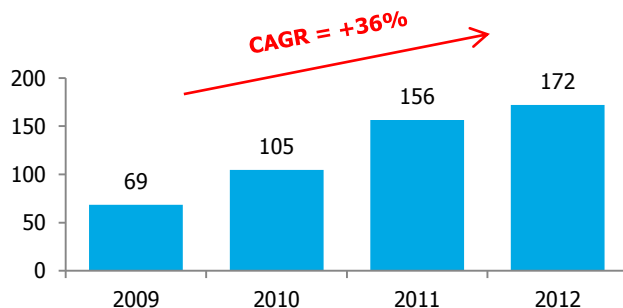
- Imports of glass fiber and glass fiber products are growing annually by **36%** on average to reach **USD 172 mn** in 2012.
- Growth of composites consumption in Russia – **13-18%** per year; state promotion of composites consumption.
- Global composites market is estimated at app. **USD 950 bn**.
- Capital expenditures for the project are estimated at **USD 20-50 mn**, payback period is **5-6 years**, IRR – **15-18%**.

MARKETS

Customs Union market:

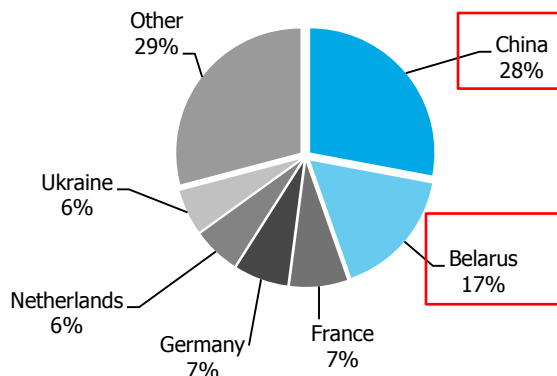
- In 2012 imports of glass fiber and glass fiber products in Russia totaled more than **USD 170 mn**. Annual average growth rate over 2009-2012 was **36%**.
- China and Belarus account for **45%** of imported by Russia glass fiber and glass fiber products.
- Fiber optics industry in Belarus is export-oriented. On average, the exports is 4 times as large as the imports.
- Russia accounts for **64%** of the exported from Belarus glass fiber and glass fiber products.

Imports of glass fiber and glass fiber products* in Russia, USD mn



*Customs tariff code 7019

Import structure of glass fiber and glass fiber products in Russia, 2012



MARKET OPPORTUNITIES

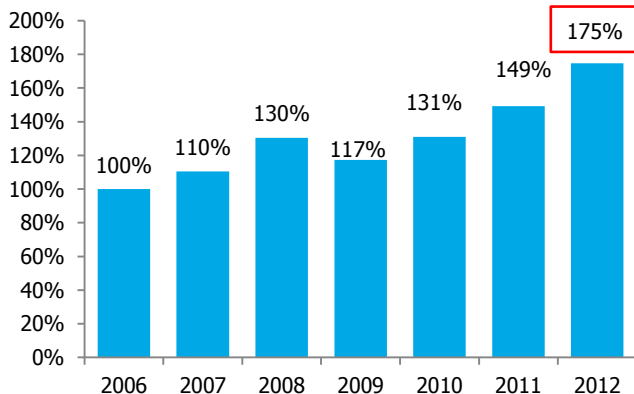
Global opportunities:

- Global composites market totals **USD 12 mn t** (USD 950 bn).
- Global composite materials market growth is projected at **20-24%** per year by 2020.

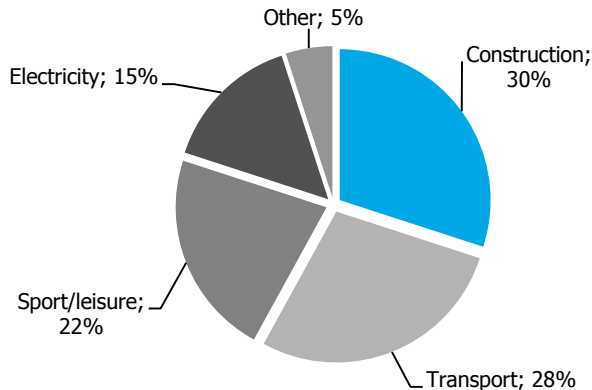
Local opportunities:

- Glass fiber is the main reinforcing material, used in composite manufacturing in Russia.
- To meet growing demand for composite materials, composites output should grow by 10 times in the near 5-7 years.
- Development of composite materials manufacturing roadmap, aiming at discovering new mass markets, was approved in Russia in 2013.
- Appropriate regulatory and engineering requirements, which are necessary for the industry development, along with industrial and regional programs on composite materials application in the related sectors, inducing consumption, are expected to be developed and adopted by 2020.
- Growth rate of Russia's composites market over 2010-2012 was **13-18%** a year. Roadmap adoption will trig growth rate of the market and help catch up with the global leaders.
- Glass fiber composites are widely applied in construction and almost all machine building industries.
- Pultruded composite is projected to be the most attractive segment of glass fiber composites – the growth rate is expected to be 1,7-2 times higher than the industry average rate.

Glass fiber composites market growth in Russia, 2006-2012 (2006 = 100%)



Glass fiber composites consumption in Europe by industries



INVESTMENT OPPORTUNITIES

- Capex may total USD **20-50 mn.**
- Payback period is about **5-6 years.**
- IRR varies within **15-18%.**

POTENTIAL INVESTORS

- Strategic investors – global (Chinese, in particular) companies with appropriate technologies and experience in manufacturing of glass fiber composites.
- Forward integration – companies engaged in the industries – key composite consumers (construction, transport, etc.).

