



PRODUCTION OF HEAT-INSULATING MATERIALS FROM FLAX

PROJECT

For implementation there is provided a project on **launching production of heat-insulating materials from flax**.

The projects is promising since:

- European and North American countries are characterized of **growing demand for natural raw materials**. Heat insulation accounts for **22%** in application of ecologically-friendly materials in the world.
- Traditions of flax cultivation** in Belarus (**4th place** in the worldwide flax production), scientific provision.
- State support** of flax cultivation, experience in production of heat-insulating materials in Belarus and appropriate **workforce capacity**.
- Russia's heat-insulating materials market totals about **50 mn cu m**. Over the past 5 years the market doubled, growing on average by **24%** a year.
- Imports of heat-insulating materials In Russia totals **USD 235,4 mn**, CAGR since 2009 – **16%**. Belarus imports heat-insulating materials to the value of **USD 90 mn** with annual average growth rate over 2009-2012 by **27%**.
- Capital expenditures are estimated at **USD 15-25 mn**, payback period is **4-5 years**, IRR - **18-22%**.

MARKETS

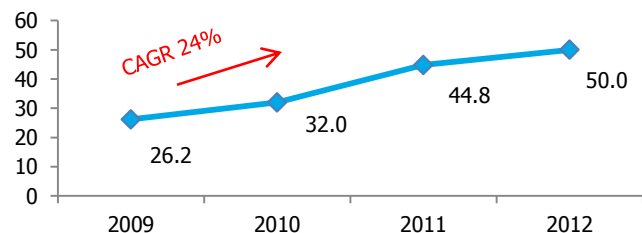
Customs Union market:

- Capacity of heat-insulating materials market in Russia totals **50 mn cu m**. Over the past 5 years the market doubled, growing on average by **24%** a year.
- In 2012 Russia imported heat-insulating materials to the value of **USD 235,4 mn**, annual average growth rate over 2009-2012 was **16%**.

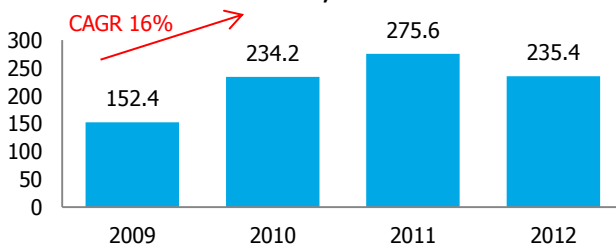
Internal market of Belarus:

- Since 2009 imports of heat-insulating materials in Belarus is growing on average by **27%**, the imports in 2012 totaled **USD 90 mn**.

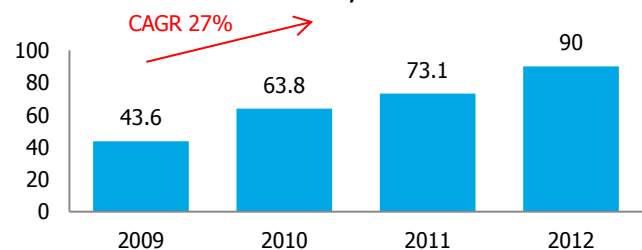
Heat-insulating materials market in Russia, mn cu m



Imports of heat-insulating materials in Russia, USD mn



Imports of heat-insulating materials in Belarus, USD mn



MARKET OPPORTUNITIES

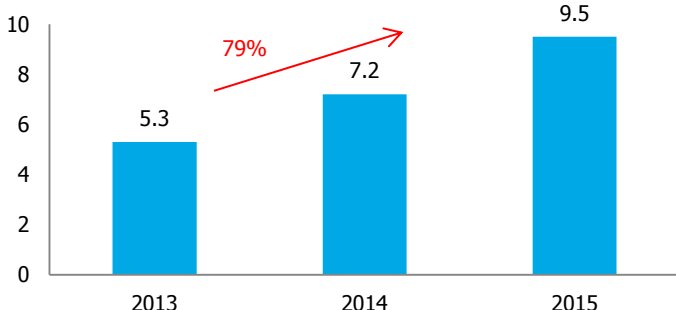
Global opportunities:

- Tendency of **growing demand for natural raw materials** in Europe and North America. Heat insulation accounts for **22%** in application of ecologically-friendly materials in the world.
- World heat-insulating materials market is estimated at about **USD 40 mn** and is projected to reach **USD 56,7 mn** by 2018, growing on average by **8,3%** a year.
- Share of fibre insulating materials in total volume of heat-insulating materials in the world amounts to **60-80%**.

Local opportunities:

- Driver of heat-insulating materials market is housing construction. In 2013 in Russia there was commissioned **69,4 mn sq m** of housing, annual average growth rate over the last 4 years totaled **4%**.
- Wearout rate of more than **half** of housing facilities in Russia is **31-65%**.
- Since 2006 price growth in housing and public utilities sector in Russia totaled **241%**.
- Russia spends **2-3 times more** energy per unit of living area than European countries with similar climate.
- Consumption of heat-insulating materials per capita in Russia is **10 times** lower than in Finland and Norway and **3 times** lower than in European countries with more mild climate.
- Russia: **Energy efficiency law** implying attainment of a certain level of energy efficiency by 2020, new edition of construction norms and rules "Building heat insulation".
- By 2015 volume of housing construction in Belarus is projected to reach **9,5 mn sq m**, having increased as compared to 2013 by **79%**.
- Belarus: **Energy saving program** implying reduction in energy consumption by 2015 by **30%** compared to 2010.
- Since 2011 price growth in housing and public utilities sector in Belarus increased by more than **60%**.

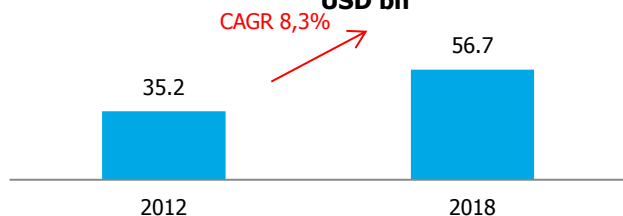
Housing construction in Belarus, mn sq m



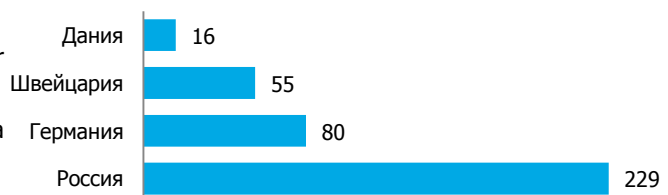
Application of environmentally-friendly materials in the world



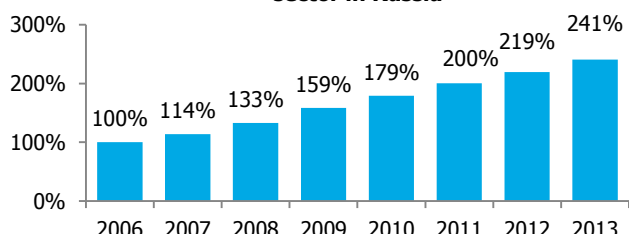
World heat-insulating materials market, USD bn



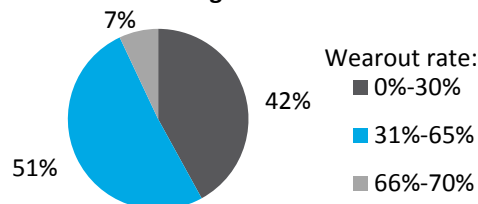
Average energy consumption of heating facilities, kW-hour/sq m



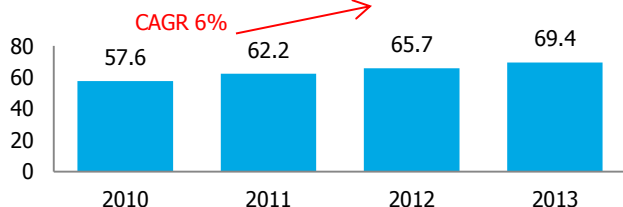
Price growth in housing and public utilities sector in Russia



State of housing facilities in Russia



Housing construction in Russia, mn sq m



INVESTMENT OPPORTUNITIES

- Capital expenditures: **USD 15-25 mn.**
- IRR: **18-22 %**.
- Payback period: **4-5 лет.**

POTENTIAL INVESTORS

Manufacturers of heat-insulating materials, focused on output expansion and consolidation of a stand at European and Easter European markets, in particular Russia, Ukraine and Belarus.