BIOGAS PRODUCTION BY PROCESSING OF AGRICULTURE, FOOD INDUSTRY WASTES AND SEWAGE SLUDGE

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BIOGAS TECHNOLOGIES

• industrial using began more than 100 years ago

• Nearly 20 biogas stations of different construction, technology and raw materials are working in Belarus
THE MAIN GOALS FOR BIOGAS TECHNOLOGIES USING

1. Ecological problems solving - processing of large-tonnage wastes
2. Energy
3. Secondary products – biofertilizers

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RAW MATERIALS

• Wastes for agriculture and energetic biomass
• Food industry wastes
• Sewage sludge from wastewater treatment plants
TECHNOLOGICAL SOLUTIONS

• Classic methanetanks
• High-effective bioreactors UASB-type

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WASTES FROM AGRICULTURE

- Manure, poultry manure etc.
- Biomass
- Wastewater from plants

Problems:
- It is difficult to calculate the real volumes
- Imperfect technological solutions

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WASTES FROM FOOD INDUSTRY

- Wastes from milk plants
- Wastewater from meat industry
- Alcohol stillage
- Sugar beet pulp
- Wastewater from biotechnological plants
- Overdue products

Problems:
- Some of wastes has a feed value
- Requires post-treatment of effluents from biogas plant
SEWAGE SLUDGES FROM WASTEWATER TREATMENT PLANTS

• Raw sediment
• Excess active sludge

Problems:
- High investments
- Problem of degistate using – high concentrations of hard metals
MAIN ISSUES IN BELARUS

• Insufficient experience in managing biogas stations
• It is difficult to calculate the real payback period
• Not enough understanding of ecological mission such projects
• The absence of a overall strategy for the biogas industry
• The design of new projects realize without the specialists in most cases
PERSPECTIVE IN COOPERATION

• Using the best practices in terms of strategic planning with the inclusion of biogas in overall energy system

• Joint research with the development of new technological solutions, exchange of experience

• Projects in the field of biofertilizers using

• Adaptation of modern projects in the Belarus conditions
THANK YOU FOR YOUR ATTENTION!

QUESTIONS?

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