Energy recovery in the region of western Slovakia
1. Introduction of ecorec
2. Current situation in MSW handling
3. Legislative targets for MSW recovery
4. Potential and alternatives of future development
5. Recommendations
1. Introduction of ecorec

- ecorec produce and supplies solid recovered fuels (SRF) mostly to cement plants of Holcim Group. We operate 5 SRF production plants in 7 countries of Eastern Europe.
- We supply 9 cement plants with annual capacity of 350 000 t of SRF
- In Slovakia we produced 50 kt of SRF in waste pretreatment platform in city of Pezinok
1. Introduction of Holcim plant Rohoznik

Investments

- Investment of 83.3 mio € in years 2003 - 2005, helped to improve energy efficiency of cement production and to increase energy recovery of waste derived fuels

Results

- 66% substitution of traditional fuels by waste
- 120,000 tons of recovered waste, savings of 80,000 tons of coal
- Decrease of CO2 emissions per ton of clinker produced by 20% compared to 1990
2. Current situation in MSW handling

MSW statistics v EU27 / 2009

Landfill: 82%
Recycling: 2.4%
Other recovery: 6.4%
Energy recovery: 9.8%
2. Current situation in MSW handling

**MSW handling in Bratislava & Trnava region**

- 1 MSW incinerator in Bratislava
- 1 MBT line treating MSW - SRF
- 1 cement plant coprocessing waste
- 1 SRF production plant
- 13 landfills

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500 kt / y of MSW produced

Source: Waste management plan 2006-2010 - evaluation
3. Legislative targets for MSW recovery

*Binding targets of the EC directives*

- Targets of Directive EC 1999/31 on landfilling – to decrease landfilling volume of biodegradable waste:
  - 75% (-25%) from total volume until 2010
  - 50% (-50%) from total volume until 2013
  - 35% (-65%) from total volume until 2020

- Targets of Waste framework directive EC 2008/98:
  - Recovery of min. 50% MSW until 2020

- Directive 2009/28/EC on the promotion of the use of energy from renewable sources:
  - Binding national target - 14% of the energy shall be produced from renewable sources until 2020
Evaluation of the targets of the Waste management plan of Slovakia for years 2006 – 2010

- Targets related to MSW
  - Reach until 2010 40 % material recovery and 20 % energetical recovery of MSW produced in Slovakia
  - Reality in 2010: material recovery 3 %, energy recovery 9 %

- Landfill max. 40 % of MSW in 2010 produced in Slovakia
  - Reality 2010: landfilling 82 %
4. Potential and alternatives of development

Successful waste management model for the region shall have following complementary pillars:
- Separate collection and subsequent recycling
- Energy recovery – efficient waste to energy (R1)
- M(B)T – production of high calorific fraction for coprocessing in energy demanding industries (cement, power plants, ...)
- Landfills

Potential to
- Increase efficiency of separate collection (esp. Bio waste)
- Build up of more 2 M(B)T lines with capacity of 140 kt
- Ensure efficient R1 incineration in Bratislava incinerator with heat and energy production heat
4. Potential and alternatives of development

Development model for the region until 2020

Model - MSW handling in the region until 2020

Increase of energy recovery to 44% shall not limit the material recovery – 20% and shall lead to decrease of landfilling to 30%

Total MSW recovery = 66%

3% growth rate of MSW production
5. Recommendations

In order to increase MSW recovery following recommendation shall be taken into account:

- develop new waste management plan considering binding targets of Slovakia for waste recovery

- investments into waste management infrastructure shall be aligned with country waste management plan

- increase of the landfilling tax

- utilize incineration capacities in incinerator – secure its R1 status with full energy utilization

- utilize existing co-incineration capacities by MSW pretreatment on the MBT lines