

COOPENERGY Action Plan Report:

- Partner:** Energy Agency of the Zlín Region
- Joint-Action:** Joint development plan between the Zlín Region and the municipalities for increasing the energy utilisation of the communal waste from the landfills in the Zlín Region
- Pillar:** Modelling, planning and monitoring tools for decision makers – pillar 2

Regional/local authorities involved:

- Regional: Zlín Region
- Local: 307 municipalities of the Zlín Region

Stakeholders involved: Energy Agency of the Zlín Region,
Central heating systems operators in Vsetín, Valašské Meziříčí,
Otrokovice and Zlín
8 landfill operators on the area of the Zlín Region

About the joint action

The directives of EC No. 75/442/ES and 91/156/ES introduced a new hierarchy in communal waste disposal. All EU member states are responsible to utilise or recycle the waste into products or energy. Only if no other option is available the rest should be removed in a safe way. Responsible authorities are expected to develop a plan for waste utilisation including sort, amount and origin of utilised waste, measurement related to specific kinds of waste, cost analysis etc.

The Zlín Region, considering the situation mentioned above, decided to start resolving the situation through MLG, i.e. involving local authorities into the planning on regional level in the area of the waste management and find the way of utilising the waste suitable for the energy production. The situation turned to be even more urgent after the survey carried out by the EAZK on existing capacities of the landfills of the Zlín Region which seem soon to be exhausted.

The findings of the survey carried out by the EAZK among landfill operators:

Landfill (place/operator)	planned capacity (m ³)	Free capacity (m ³)	Projected capacity (m ³)
Zdounky operator DEPOZ, spol. s.r.o.	370 000	81 000	82 000
Bystřice pod Hostýnem operator .A.S.A. Bystřice pod Hostýnem, s.r.o.	720 000	380 000	720 000
Prakšická – Uherský Brod operator RUMPOLD UHB, s.r.o.	367 868	50 487	418 355
Suchý Důl, Zlín operator TS Zlín, spol. s.r.o.	935 320	604 427	935 320



Slavičín – Radašovy operator Skládka odpadů Slavičín, s.r.o.	76 000	60 000	76 200
Smolina – Valašské Klobouky operator Valašskokloboucké služby s.r.o.	400 000	269 817	400 000
Březová operator EKO-UNIBAU a.s. Praha	210 000	66 750	210 000
Kvítkovice operator Moravská skládková a.s.	1 653 820	110 000	1 224 075
Total	4 733 008	1 622 481	4 065 950

Through the collaboration model described in the section "About the Collaboration model" the study has been elaborated with some outstanding outputs.

The study was aimed on analysis of possible waste utilisation in the Zlín Region in a long term period.

Main findings:

Production of selected waste components and the level of separation:

Waste component	Kt in 2014	Kg per capita in 2014
Mixed communal waste	113,6	193,7
Paper	10,5	17,9
Plastics	6,1	10,4
Glass	6,3	10,8
Bio waste	24	40,9
Bulky waste	23,2	39,6

Targets for separation of waste have been set for 2015 in two scenarios – expected x ambitious, considering existing starting points (efficiency of separation has a great potential to grow, network of separation containers is developed to be able to manage the considerable increase):

Waste component	Kg per capita in 2014	Scenario A (expected) [kg per capita]	Scenario B (ambitious) [kg per capita]
Paper	17,9	37	62
Plastics	10,4	25	25
Glass	10,8	28	28
Bio waste	40,9	47	47

Potential of the combustible waste – a basis for a further calculation:

Waste component	Scenario A (expected)		Scenario B (ambitious)	
	Kt	Kg per capita	Kt	Kg per capita
Mixed communal waste	83,2	141,8	68,5	116,8
Paper	23,2	39,6	23,2	39,6

Conclusions

- Annual present production of combustible waste is **137 kt** (2013), out of that, 114 kt is produced is municipal waste. More effective separation is expected in upcoming years.
- Two scenarios have been elaborated for combustible waste production, 'expected' with 99 kt/year and 'ambitious' with 84 kt/year.



- Calculation proved that just one facility with capacity to process more than **100 kt/year** in one potential locality (Otrokovice) would lead to high prices of waste processing as a result of the network with insufficient demand in combination with low production prices (replacement for brown coal).
- Considerable better economical results would be brought by concept based on realisation of more facilities for energetic waste utilisation (ZEVO) with the capacity to process up to **40 kt/year**.
- 4 localities are considered with central heating systems - Vsetín, Valašské Meziříčí, Otrokovice and Zlín
- The best locality for the development of the small facilities for energetic waste utilisation was found Vsetín due to suitable network dimension and high energy production prices.
- The success in localities Zlín, Otrokovice and Valašské Meziříčí may be considerably influenced by the behaviour of competitive projects outside the Zlín Region area as there is a threat that the projects in respective localities within the Zlín Region may not be able always offer the best price for waste producers in potential waste delivery area.

About the Collaboration model

The Energy Agency of the Zlín Region has been developing the joint action under the patronage of the Zlín Region and in the cooperation with municipalities of the Zlín Region, central heating systems operators and landfill operators. Municipalities were approached directly as well as through direct emails, COOPENERGY Newsletters, Info Days, personal contacts etc. Eventually, all 307 municipalities of the Zlín Region were reached, informed and invited to participate on the solution of the waste utilisations in the area of the Zlín Region.

Until mid 2015 altogether 4 meetings focused on the waste management and utilisation with 37 municipalities and stakeholders have been held. The current situation was discussed, further steps were planned. The municipalities were willing to cooperate on searching for the solution which needs to be realised in a complex way in cooperation with as many municipalities as possible. A questionnaire was developed by the EAZK investigating the situation with waste management in municipalities of the Zlín Region and these questionnaires were circulated to all municipalities of the Zlín Region in November 2014. Completed questionnaires were processed and further incorporated in the study described closely in the section „About the joint action”.

On a basis of the survey, the meetings with municipalities and the data and information gained the outline of the future development on the field of waste utilisation in the area of the Zlín Region was elaborated aiming the possible selection of the suitable place for development of the facilities for energetic waste utilisation in the area of the Zlín region.

The final study was partly subcontracted, in order to utilise the calculating tools for decision making in waste management. The concrete outcomes of the analysis are the suggestion of suitable conceptions of the waste management with the residual communal waste on the area of the Zlín Region and their evaluation from the perspective of the future economical sustainability.

The COOPENERGY project allowed the collaboration among different decisional levels in the region; the EAZK as a representative of the regional level provided its technical expertise, experience and know-how leading to creation of the effective and flexible network of local and regional authorities working together on regional waste management issues.

The collaboration model will continue beyond the period of the COOPENERGY project, the project itself just started the activities which are supposed to lead to the ‘wasteless’ Zlín Region after 2024.



Co-funded by the Intelligent Energy Europe Programme of the European Union



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ACTION	DEADLINE	STATUS	PROGRESS
Promotion of the MLG model to municipalities of the Zlín Region and encouraging local actions through Joint development plan between the Zlín Region and the municipalities for increasing the energy utilisation of the communal waste from the landfills in the Zlín Region	July 2015	Finished	Successfully being carried out through direct emails, COOPENERGY Newsletters, personal contact, Info Days
Organisation of local working groups meetings	April 2015	Finished	4 meetings focused on the waste management and utilisation with 37 municipalities and stakeholders have been organised
Collecting relevant data for elaboration of the study outlining a future development on the field of waste utilisation in the area of the Zlín Region	May 2015	Finished	Data successfully collected through questionnaires, local working group meetings and the EAZK explorations
Study outlining a future development on the field of waste utilisation in the area of the Zlín Region	August 2015	Finished	Complete study available
Activities aiming 'wasteless' Zlín Region after 2024	Continuous	Ongoing	