

O.T3.2 FIVE FEASIBILITY STUDIES FOR AS MANY REEF 2W DEMONSTRATION PILOTS

Conducted by Veolia CR

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Unioncamere
Veneto



ZAGREBAČKI
HOLDING d.o.o.



VEOLIA

Montefeltro
servizi



UNIVERSITY OF
CHEMISTRY AND
TECHNOLOGY
PRAGUE



Reinhaltungsverband Trattnachtal
Biogas Trattnachtal GmbH

KOMPETENZ ZENTRUM
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OUTPUT FACT SHEET

Pilot actions (including investment, if applicable)

Version 2

Project index number and acronym	REEF 2W
Lead partner	UCT
Output number and title	OT3.2 Five feasibility studies for as many REEF 2W demonstration pilots
Investment number and title (if applicable)	-
Responsible partner (PP name and number)	Montefeltro Servizi PP3
Project website	https://www.interreg-central.eu/Content.Node/REEF-2W.html
Delivery date	31.03.2020
Summary description of the pilot action (including investment, if applicable) explaining its experimental nature and demonstration character	

The waste collection platform of Montefeltro Servizi analyze the possibility to recovery energy from the available organic waste collected. The reason of this choice is due to the need to reduce the costs of the treatment that at the moment is realized in an external facility and the necessity to reduce the traffic in the already crowded road that connect the local platform to the composting plant.

Because of the large amount of dry organic material in the available wastes the more suitable solution analyze is the possibility to use a gasification system.

This system could have also the advantage to produce not only energy but also a large amount of bio char that could be utilized as a fertilizer in the lands around the plant.

From the analysis conducted the investment costs of the gasification system is too high if managed with only the already available wastes. For this reason an overview of other dry organic wastes available in the territory has been conducted. From the conducted analysis it was possible to identify a large amount of dry wastes not collected by the utility because independently disposed by the company.

With this additional amount of waste the investment cost for the gasification system decrease in terms of cost per ton treated and provide the possibility to recovery the investment costs in 8 years.

The reason of this rather not excellent recovery of the cost is due at the possibility to recovery only the electricity produced. The heat produce from the gasification system could be only partially used for building and sanitary water heating. An analysis of the closed industrial area demonstrate the disadvantage to distribute heat in such buildings although there is a strong need. Unfortunately, the analysis could have an environmental positive impact but from the economic point of view it is simply unfeasible.

Also the possibility to install a photovoltaic field on the roof of the buildings ahs been considered.

All the technologies considered are able to provide the much more energy than the need at the treatment plant.

Two different scenarios were analyzed. The first is simply to sale the energy at the electric energy grid. A second scenario instead is related at the particular property situation of the multiutility. It is a private company owned by neighborhood municipalities. Because of the Italian legislation it is possible to use the grid for free to transport the energy produced to the public building of the municipalities in this way the advantage is much higher than the first scenario

NUTS region(s) concerned by the pilot action (relevant NUTS level)

Italy (NUTS-2 Region: ITD59).

Investment costs (EUR), if applicable

-expected invest for the realization of the infrastructures needed is about 850.000€

Expected impact and benefits of the pilot action for the concerned territory and target groups and leverage of additional funds (if applicable)

The suggested scenario can reduce the cost for the treatment of wastes and can reduce pollution generated by the tracks moving wastes.

The second positive effect of this solution is the general reduction of the pollution that could be produced by the use of conventional energy available in the grid.

Sustainability of the pilot action results and transferability to other territories and stakeholders.

Gasification is not a new technology, that in these last years received a new interest for its application in some particular situations. The char produced is possible to recover and use it as fertilizer.
The repeatability of the pilot experience to other territories is of course possible, limited only by the availability of the correct wastes.

Lessons learned and added value of transnational cooperation of the pilot action implementation (including investment, if applicable)

There was only limited transnational cooperation in this case. However very interesting was comparison of legislative framework and boundaries in different CEU countries.

Contribution to/ compliance with:

- relevant regulatory requirements
- sustainable development - environmental effects. In case of risk of negative effects, mitigation measures introduced
- horizontal principles such as equal opportunities and non-discrimination

The contribution of the described pilot action is very strong in the field of sustainable development - environmental effects. The effects are absolutely positives even if only the electricity can be used; but if the heat produce can be used all the year the advantage is much higher. Legislation is particularly stringent in the case of gasification systems, and it is correct to prevent the potential pollution, but modern systems are able to provide performances absolutely in line with the health and environmental protection legislation.

References to relevant deliverables (e.g. pilot action report, studies), investment factsheet and web-links If applicable, additional documentation, pictures or images to be provided as annex

The O.T3.1 is closely related to five Feasibility studies described in D.T3.3.1 - D.T3.3.5. conducted in each project partners country.