

Germany **Manolis Karampinis**

<i>Institution</i>	Centre for Research and Technology-Hellas / Chemical Process and Energy Resources Institute (CERTH/CPERI)
<i>Position</i>	Research associate (Msc. Chemical Engineer)
<i>Field of work</i>	Research. Background in: <ul style="list-style-type: none"> • Biomass co-firing and combustion • Agricultural residues logistics • Policies and regional perspective of biomass utilization

Experience

<i>About the feedstock, processing & conversion</i>	Administration and public municipalities' approach CERTH interested in carrying out projects, consultancy service to suggest possible conversion technologies, etc. Collaboration with Covenant of Mayors. They have collaborated with Athens' municipality on projects (regarding different topics food waste collection, biogas units, smart cities, mobility) to provide consultancy services. The municipality is in charge of the park maintenance, therefore carrying out the pruning from gardens and parks (mainly parks) which generates around 5000 t of wet biomass that is mainly landfilled thus they are looking into options that will allow obtaining some revenue which would contribute to reduce the cost associated to the waste management. CERTH, as a research organization, is working with all biomass types; in the frame of this interview, prunings and green waste from the municipal parks and gardens is discussed.
<i>Policies, finance tools and legal regulations</i>	Municipal regulations can affect. Municipal plans are established including the treatment of parks in order to carry out the pruning yearly also some work to prevent risk like big or old trees felling. Forest protected areas also account with a management plan. The management of the biomass from these forest protected areas implies a problem due to the illegal felling taking place. The neighbors have the right to extract a certain quantity of biomass mostly for firewood use but there is additionally some illegal cutting taking place which is an issue for this type of feedstock and makes difficult to monitor what happens with this resource. The national laws governing urban waste management are developed in line with relevant EU directives and there is an effort to increase the organic fraction of municipal solid waste that is collected separately. Due to their seasonality and coordination of the work from the municipal authorities, prunings from public parks are even now frequently collected on a separate basis. The collection and transport cost is paid by the local (municipal) taxes but there are no European/national subsidies. If the material is forwarded to



landfilling, then a gate-fee also applies but this may be cut down to zero if the material goes to a composting plant.

Some municipalities have initiated pilot projects for small-scale compost bins; sometimes these are funded by EU projects, e.g. LIFE+.

Neither the pellet production nor the composting are directly funded at national or local level (funds might be available for capital investments, e.g. a pellet production line, but not directly for the pellet production).

The feed-in-tariff for power production from biomass is not based on the type of feedstock so LCMW are not identified as a different or special tariff.

Difficulties & barriers

The instable political situation and financial crisis is an issue. There is a lack of responsibility; sometimes it is difficult to identify the responsible body.

Potential drivers & recommendations

The transport of this type of material is quite expensive due to its not compressed but it has to be done anyways.

Public support & good governance

The use of biomass in Greece has increased significantly (firewood use represents 20% in 2011/12 over the heat services in the municipalities, mostly in countryside, it used to be 10%).

Due to the lack of political stability it is difficult to foresee any improvements. The energetic use is the best alternative but it would need to overcome different constraints.

In general there is an important issue regarding the people trust on the biomass for energetic use. They do not want the responsibility a biomass installation involves related to its maintenance requirements (cleaning, ash management, etc).

The constraints related to transport could be solved mostly by local treatment previous to the transport using crusher located in different point of the municipality. Additionally the use of this resource should be as local as possible to reduce the transport.

Also the promotion of good examples/successful projects based on this type of feedstock could help to increase its use.

Public acceptance regarding harvesting, processing & conversion

Not related specifically to LCMW but it is worth mentioning that if a new initiative wants to be implemented (power plants, biogas plant, composting plant, pellet manufacture, etc) it needs to go through a public hearing process.

Good practices of cooperation & participation

Good governance mechanisms

As previously commented sometimes the municipality subcontracts the work to an external company in which case they can make an arrangement so that the company can dispose of the biomass obtained and the cost of the works subcontracted is lowered.

Wider insight

Social acceptance would be an issue to address if there are not pre-existent plants for combustion/composting/biogas production and a new initiative wants to be settled. Currently if no

biogas/pellet manufacture/combustion plant is already in place composting is the cheaper option but the energetic use is the best pathways because it would allow obtaining a benefit. The process to promote a new initiative, like a biogas plant that could use this type of feedstock, is very slow.

A centralized collection will be required in order to simplify the procurement chain.

This type of feedstock need to be treated separately from other waste material at municipal level.

The main limitations concentrate at conversion stage; landfill is not the best solution but is the working solution for now.

Biogas plants currently take the biomass from nearby, maybe this type of feedstock could be used but it has not been done.

Contact information

Interlink

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