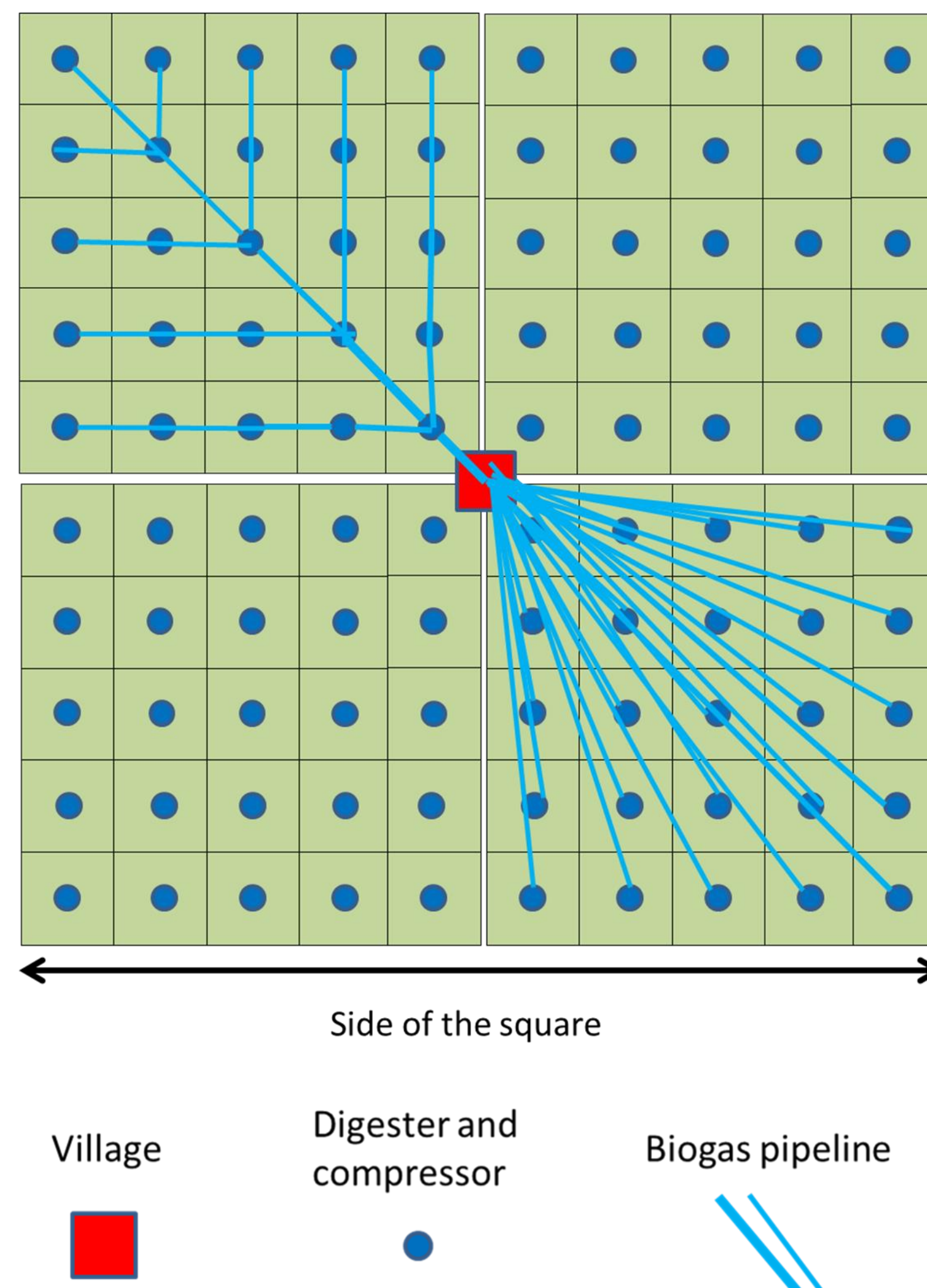
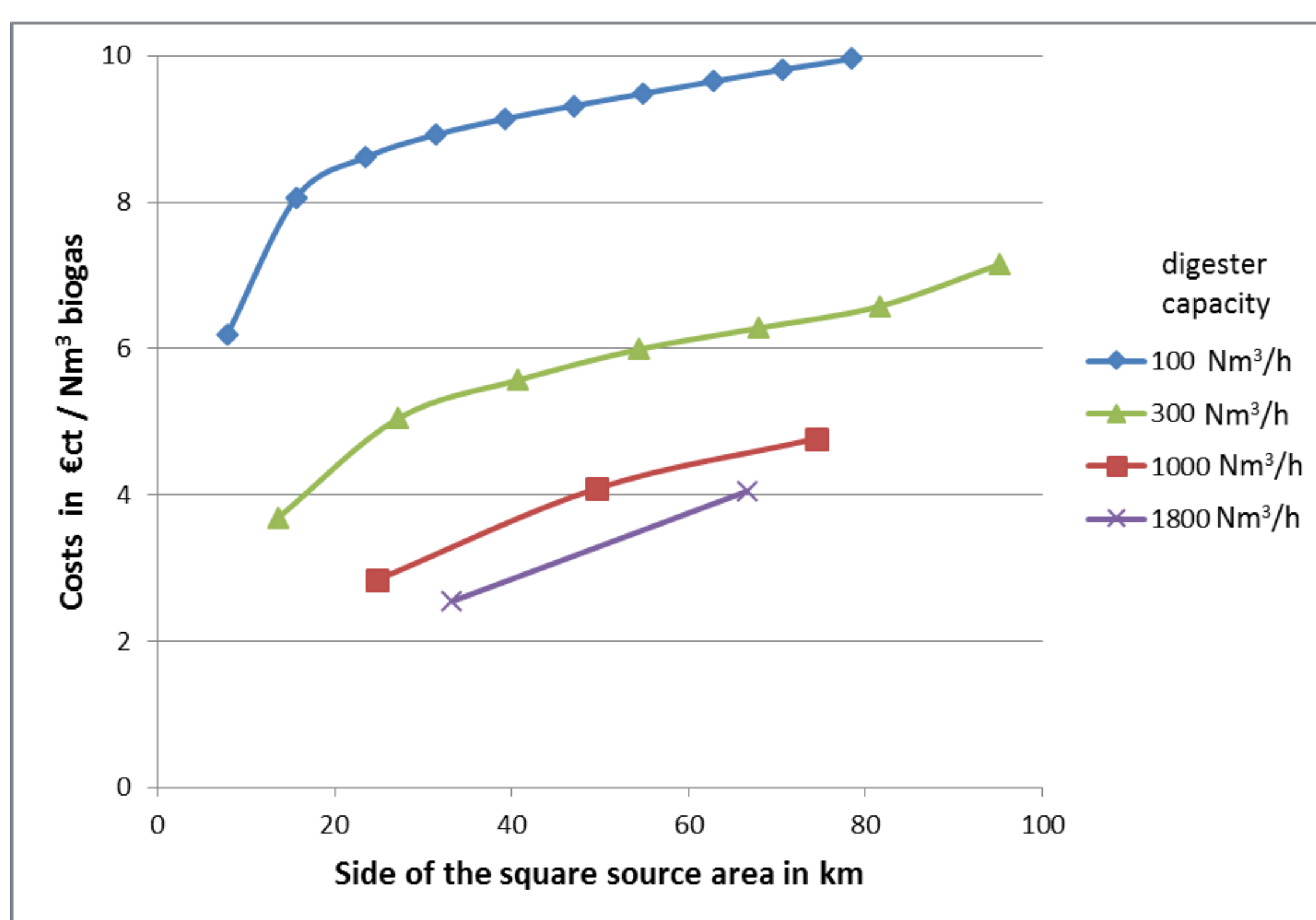


A regional biogas infrastructure, prospects for the biogas grid.

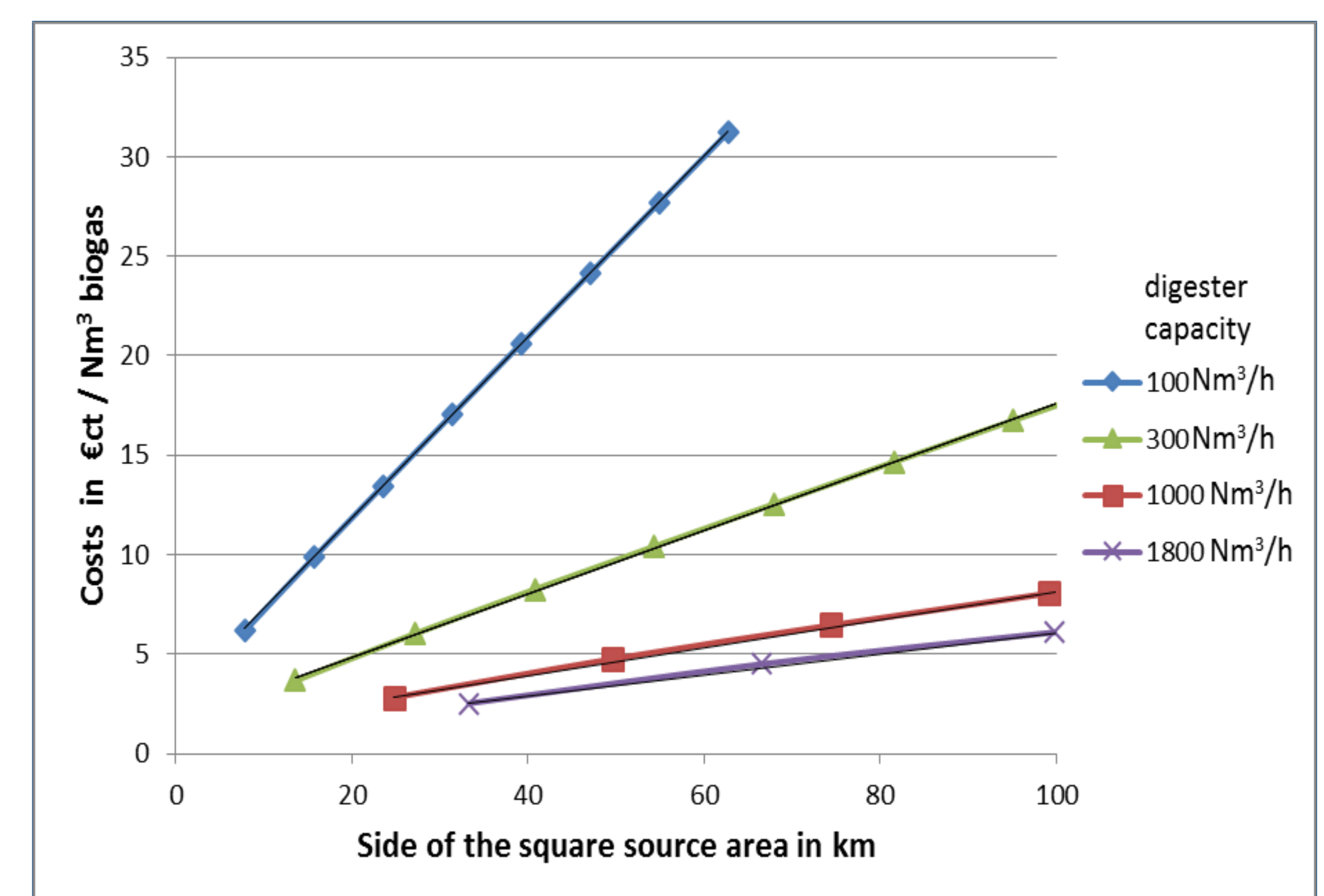
E.J. Hengeveld^{1,2}, W.J.T. van Gemert², J. Bekkering^{1,2}, A.A. Broekhuis¹

Transport of biogas: Quantifying costs of a regional biogas grid

Fishbone lay-out



Star lay-out



Model calculations for a biogas grid

Transport costs are minimized by the optimal choice for pipeline diameters in the grid for the two lay-outs.

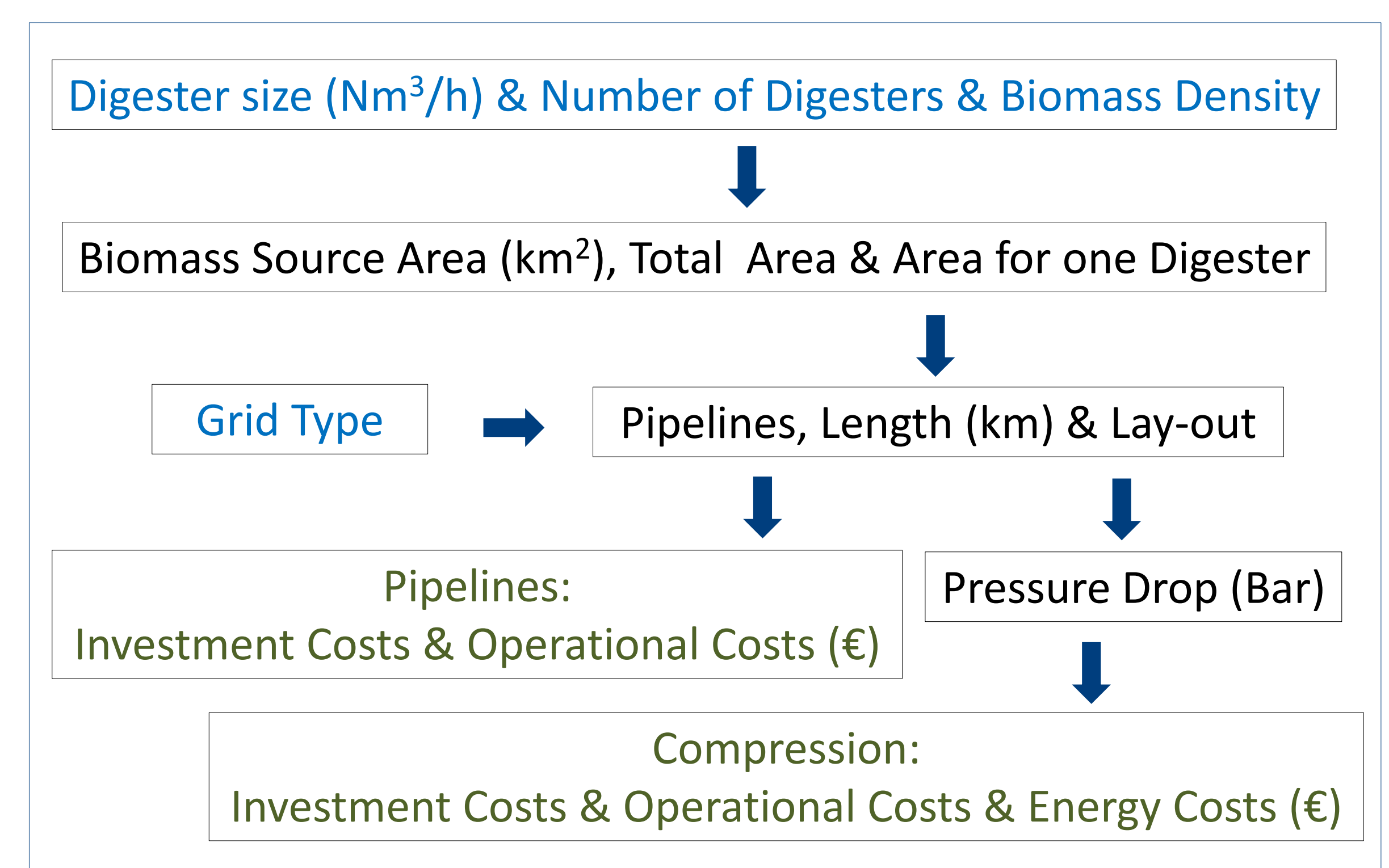
NPV-calculations based on the investment costs (pipelines & compressors) and operational costs (O&M & Energy); safety measures not yet considered.

Note that large digesters have a large biomass source area and therefore are more widely spaced.

Maximum pressure in the grid to be 9 bar(a).

Line-pack storage in the biogas grid has been assessed by simulation of the maximum pressure.

Dependencies in the model



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