Biogas is an essential biomass source for achieving a reduction of CO2 emission by 50% in year 2030 in Denmark. The physical potential for biogas production in Denmark is more than 10 times the present biogas production in Denmark. In Denmark the largest part of the biogas production is produced at 19 decentralised joint biogas plants involving a varying number of farms (5-100). All of these plants use to some extent co-fermentation with industrial organic waste to increase biogas yield. A fuel chain approach for utilisation of biogas for energy purposes is carried out for determining the role of increased transportation distances at large biogas plants on the total CO2 balance of the biogas plant. The advantage of constructing large biogas plants is the cost-effective possibility of using industrial organic waste to increase biogas production. In some cases co-fermentation increases biogas production up 100%. The present study evaluate optimal transportation strategies for biogas plants taking CO2 balances into account.