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TRANSPORT EXTERNAL COSTS EVALUATION CASE STUDY

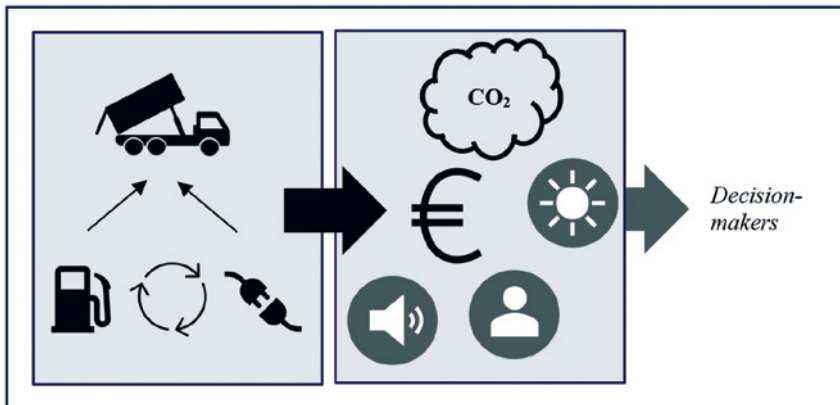
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Abstract – With the European Union’s goal of becoming a carbon-neutral region by 2050, its member states must follow suit. Businesses are among the actors that have a role to play in implementing this policy. Many companies have set such targets and often commit to becoming carbon neutral even earlier. However, businesses need an economic justification. Financial calculations are usually limited to analysing direct costs, equipment purchases, and maintenance costs, without considering other aspects. This case study examines the external costs of the transportation sector in a waste management company. Transport is the second largest source of greenhouse gas emissions in the EU after the energy sector and is characterized by increasing CO₂ emissions. Based on the company’s case study, the external costs of the vehicles are calculated, which depend on the type of engine and energy used in the vehicles, as well as the travel patterns. In the scenario modelling, these external costs are compared with scenarios with a 100 % battery electric fleet. The results show that the total external costs decrease as the BEV share in the vehicle fleet increases. When analysing transport externalities of the substation project, air pollution, climate change, and noise costs decrease, while WTT emission costs increase.

Keywords – BEV; costs; CO₂; externalities; transport; waste



Stimulating businesses by including external costs in the assessment of the economic feasibility of fleet conversion projects.