POLYAS

CO²-EMISSIONS: ONLINE AND POSTAL ELECTIONS COMPARED

Online Voting reduces your CO2 emissions by up to 98%

In 2009, Climate Partner was contracted by Micromata Gmbh to study the impact that online voting has on the environment in comparison to more traditional postal voting. The resulting report concluded that online voting is significantly better for the environment than voting via post.

Example Voting Scenario

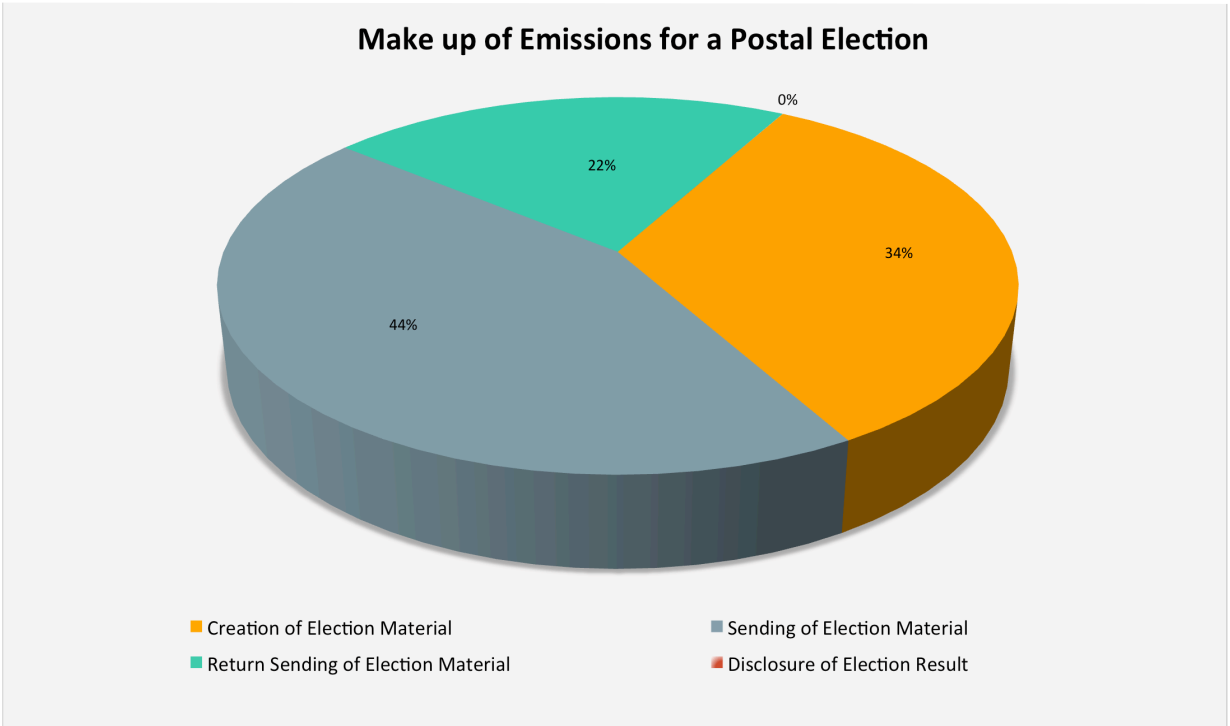
For the study, an example election scenario was ran. The CO2 emissions were calculated for a board of directors election for a bank with 36,798 voters.

CO2 emissions for postal election only

For the election of a board of directors, with the stated number of voters, Climate Parnter calculated 2999.363 Kg of emissions. This comes to a total of 81.61g of CO2 per voter.

The process and make up of the CO2 emissions for a postal election only

Process	CO^2 - total emissions	CO^2 - emissions per voter
Creation and printing of election documents	1012 Kg	27.5 g
Sending of election documents by post	1325 Kg	36.1 g
Return send of election documents by post	662 Kg	18.0 g
Disclosure of election result	363 g	0.01 g



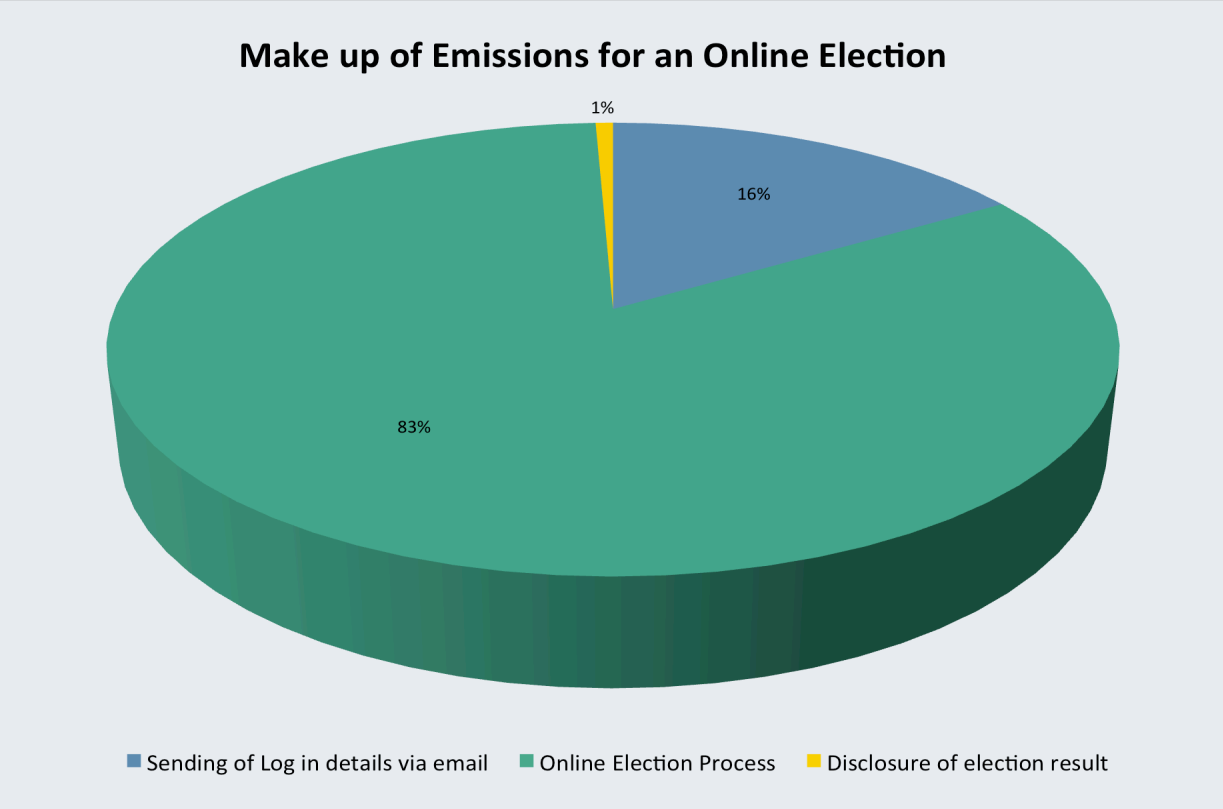
CO²-EMISSIONS: ONLINE AND POSTAL ELECTIONS COMPARED

CO²-emissions for just online elections

For the election of a board of directors with the stated number of voters, Climate Partner calculated a total output of 55.363 Kg of CO2 emissions. This comes to a total of 0.36g per voter.

The process and make up of the CO2 emissions for an online election only

Process	CO^2 - total emissions	CO^2 - emmisions per voter
Sending of postal documents by email	9 Kg	0.25 g
Online	46 Kg	0.10 g
Disclosure of election result	363 g	0.01 g



Comparison between postal voting and online elections

The Climate Partner's data shows that postal elections release approximately 54 times more emissions than an online election alone. An online election, not combined with other voting procedures, produces ca. 98% less than postal elections. Online voting does not just produce less CO2 than postal voting, but it is an environmentally friendly alternative to postal election procedures.

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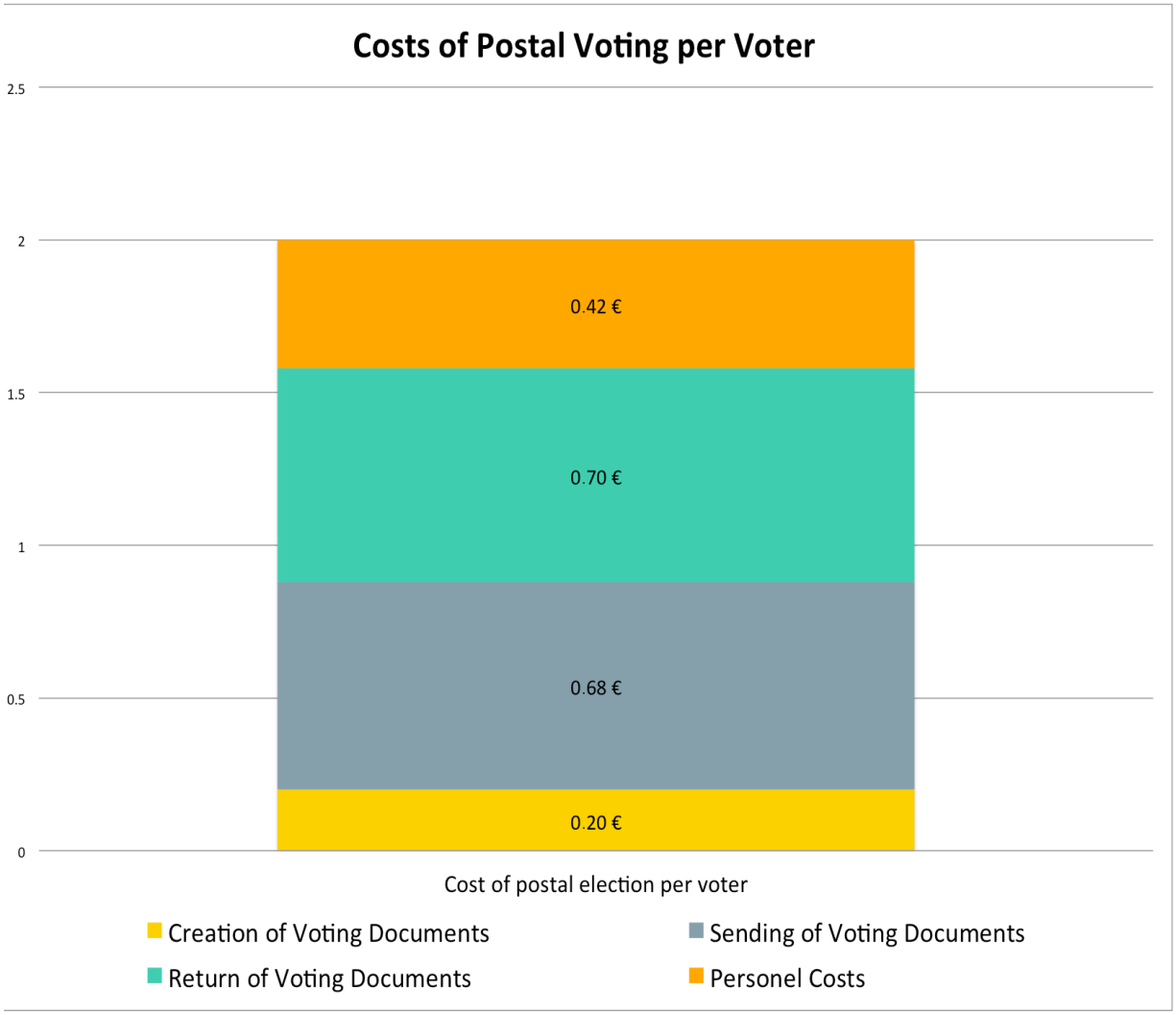
Comparison of the proportional CO2 emissions between postal and online voting



With up to a 98% lower carbon footprint than postal voting, online elections are the environmentally friendly alternative.

COSTS: ONLINE VOTING VS POSTAL VOTING

Online elections are not just environmentally friendlier than postal election, they also reduce the costs of elections.

Compaison of the costs os online voting and postal voting

With an online election, there are no costs for the manufacturing, printing and packaging of election documents. Similarly, there are no costs for postage and return postage. Furthermore, personel costs can be reduced as votes are now counted digitally and automatically in an secure, legally valid, automated system. While postal elections usually cost around €2 EUR per person, online voting typically offers an average of under €1 EUR per voter.

Costs	Costs per voter in EUR
Creation of election documents	0.20 €
Sending of election douments	0.68 €
Return of election documents	0.70 €
Personel costs	0.42 €