

Frequently Asked Questions

1. What information is included in the calculator?

The calculators estimate the environmental impact of receiving a paper bill or statement, and then subsequently mailing a paper payment. The calculator includes the environmental impacts of all the steps in the lifecycle of a paper bill or statement from the manufacture of the paper, to printing, shipment to the customer, submission of payment by the customer, and final processing by the bank. The calculator also includes the energy usage of a customer using his or her home computer to view statements and pay bills online, and the energy usage of a bank's servers involved in processing the online payment.

2. Where does the calculator data on paper come from?

The data on the amount of paper used in printing bills, statements, and checks annually was provided by PayItGreen members. The data on the environmental impact of producing this paper was taken from Environmental Defense Fund's Paper Calculator (available at www.edf.org/papercalculator/). This calculator allows the user to calculate the environmental impact of different types of paper in terms of wood use, energy use, water use, greenhouse gases produced, and solid waste produced.

3. Where does the calculator data on greenhouse gases come from?

The data on the greenhouse gas impact of printing and transporting paper checks and bills was provided by the "Life and Travels of a Paper Check" study done for NACHA. Additional greenhouse gas data related to transportation was calculated using the World Resources Institute's Mobile Combustion Calculator (available at www.ghgprotocol.org). The greenhouse gas equivalency data was taken from EPA's Greenhouse Gas Equivalency Calculator (available at www.epa.gov/cleanenergy/energy-resources/calculator.html). This calculator allows the user to translate an amount of greenhouse gas emissions into an equivalent metric (for example, the calculator translates the amount of greenhouse gas emissions into miles not driven in your car) to help put the users' emissions metrics into perspective.

4. Where does the data on computer and internet energy use come from?

The data on energy use of a home computer comes from energy savings calculators created by Energy Star (available at <http://www.business.gov/expand/green-business/energy-efficiency/calculate-savings/energy-saving-calculator.html>). Estimates of the amount of time spent paying bills online were provided by PayItGreen members, and the energy used to transfer data

online was taken from the paper “Estimating Energy Use and Greenhouse gas Emissions of Internet Advertising” by Cody Taylor and Jonathan Koomey (available at <http://eetd.lbl.gov/emills/commentary/docs/carbonemissions.pdf>).

5. When was the last update of the calculator conducted? How often are the calculators updated?

The calculators are updated at least every six months, with additional updates made if new source data is published or if changes in the banking industry necessitate a change in the calculator assumptions. The most recent calculator updates were done in March 2010 and August 2010. The first update added the impact of the consumer’s computer’s energy use involved in viewing statements and paying bills online and the energy use of the bank’s servers and data centers. The second update separated bills and statements into two separate data entry fields.

6. What is the difference between the actual amount of resources consumed (for example, trees) and the greenhouse gas equivalences (trees planted)?

The number of trees consumed refers to the total amount of paper used in creating and processing paper bills, statements, and payments. The number of trees planted is calculated using EPA’s Greenhouse Gas Equivalency calculator. In the case of trees planted, this number refers to the equivalent amount of greenhouse gases that can be removed from the atmosphere by one tree seedling that is planted and then grown for ten years. In the case of trees planted, no actual trees are planted or consumed, but this number is used to illustrate the greenhouse gas impact of paper bills, statements, and payments.

7. What kind of bills, statements, and payments were used in developing the calculator?

The calculator bases its calculations on the weight and paper content of an average bill, statement or payment. The average bill or statement is assumed to contain an envelope, an invoice with a detachable portion that should be returned with payment, and a return envelope for mailing in the bill payment. The average bill or statement is assumed to weigh 0.028 pounds. The average bill payment is assumed to contain an envelope, a check, and a portion of the invoice. However, the weight of the average bill payment is calculated using only the check since the weight of the invoice and the return envelope were already accounted for when calculating the weight of the bill. The average payment is assumed to weigh 0.0492 ounces.

8. What kind of paper is used in the calculator’s assumptions?

The calculator uses paper data from Environmental Defense Fund's Paper Calculator (available at www.edf.org/papercalculator). The calculator assumes that bills and statements are printed on uncoated, free-sheet copy paper that does not contain any recycled content.

9. What is the difference between the Paper Footprint Calculator and the Direct Deposit Financial Paper Footprint Calculator?

The Direct Deposit Financial Paper Footprint Calculator and Paper Footprint Calculator were both developed to help businesses and consumers reduce their impact on the environment. The Paper Footprint Calculator is designed to estimate the environmental impact of all of the bills and statements that a business sends to its customers, and the paper payments that the customers send back. By using the Paper Footprint Calculator, businesses can estimate the environmental benefits of getting their customers to switch to electronic billing and statements, and consumers can estimate the impact of switching to electronic bills and statements.

The Direct Deposit calculator was developed using the same data sources and methodologies as used in the Paper Footprint Calculator, but it is designed to estimate the environmental impact of the paper paychecks issued by a business to its employees. Because the lifecycle of a paycheck is slightly different from that of a paper bill or statement, the Direct Deposit Calculator only assumes a subset of the process considered in the Paper Footprint Calculator to account for this difference. Note that the Direct Deposit calculator does not yet include the impact of energy used by computers in processing paychecks.

10. Who can I contact if I have additional questions about the calculator?

For more information, you can contact PayItGreen directly through the Contact Us page on www.payitgreen.org.