

Reducing the Commission's carbon and ecological footprint BUSINESS TRIPS

EXECUTIVE SUMMARY

The Commission should accelerate its effort to reduce the emissions from business trips, in particular those using air travel, which are major contributors to its carbon footprint.

The Commission is the only EU institution that has not fixed reduction targets for its business trips. Instead, each DG is keen on spending its entire yearly mission budget in order to claim an identical budget for the next year. Such behaviour prevents any efforts to reduce and even encourage unnecessary missions.

A best-in-class policy would first **Avoid** the need to travel (through e.g. the use of videoconference), then **Reduce** emissions from travel (e.g. by taking the train instead of the plane), and **Offset** the residual unavoidable business trips through high quality offsets (e.g. gold standard).

This approach is in place in some Member States, notably Germany, where the Federal Government and a number of participating Authorities and Agencies offset the emissions of their employees' business trips since 2014. The European Environment Agency (EEA) is applying such a policy not only for its staff but also for the trips of participants to meetings since 2006. Other institutions and organisations have implemented or are in the process of implementing it. The European Parliament has been offsetting its staff's, members' and visitors' travels since 2016 and claims to be the only carbon-neutral EU Institution. The Council, European Investment Bank and European Central Bank have fixed reduction targets and are currently assessing offsetting mechanisms.

We propose that the Commission apply the following policy for its business trips:

- i. To extend the calculation of the emissions, not only for the business trips of its staff as is done today, but also to external participants in Commission meetings or Commission financed activities in order to measure and reduce the wider indirect emissions created by the Commission.
- **ii. To avoid missions whenever possible** through a drastic improvement of IT and videoconference capabilities, in particular in the largest EU delegations worldwide as the emission savings stemming from long distance travel are the largest.
- **iii. To fix ambitious yearly emission reduction target** to allocate top-down to each DG. The "Missions Rules" should be urgently adapted to focus on the means of travel with the lowest emissions even when reasonably more expensive or longer. The policy to use business class for intercontinental flights should be revised, at least when the work at the place of mission is not back-to-back with the flight arrival. Staff should be incentivised to take the train or economy flights. Train should be mandatory below 500 km.
- **iv. To offset the unavoidable travel emissions.** A Commission or EU-wide compensation scheme could be considered, such as an extension of the LIFE programme or other new or existing emissions saving projects in Europe.
- v. To lead by example. Exemplarity and ownership of all layers of the organisation are key. We suggest an "exemplarity" competition for the lowest carbon footprint for each Commissioner and similarly for each member of staff, based on an individual "carbon counter" adding the CO2 emissions calculated from each staff member's business trips.



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BACKGROUND AND FULL PROPOSAL

1. Context

Business trips, and in particular those using air travel, are the largest contributors to equivalent CO2 emissions in travel intensive organisations such as the Commission. In view of the Commission's proposal for a climate-neutral EU by 2050^{1,2} and the overarching priority of the Commission President-elect for a European Green Deal, the Commission should therefore **decide to avoid, reduce, offset³ and greenovate the climate impact of its employees' business trips**.

This approach is already in place in some Members States, notably Germany, where the Federal Government and a number of participating Authorities and Agencies offset the climate impact of their employees' business trips since 2014⁴ (see factsheet⁵ in Annex).

Some European institutions already implement carbon offsetting.

- The European Environment Agency (EEA) has been offsetting its staff's business trips and those of participants in its meetings since 2006.
- The European Parliament has been offsetting travel by its staff, members and visitors since 2016 and claims to be the only carbon-neutral EU Institution⁶.
- The European Investment Bank and the European Central Bank are currently assessing offsetting mechanisms.

Conversely, the Commission, although it became the first EU institution to register under the Eco-Management and Audit Scheme (EMAS) in 2005 and measures its carbon footprint on a yearly basis, has not yet taken steps to reduce and/or offset the climate impact of its staff's business trips, which represent the largest equivalent CO2 emission contribution.

¹ [COM(2018)773 final] A Clean Planet for all : A European strategic long-term vision for a prosperous, modern, competitive and climate neutral economy

² How the Commission in it operation can become greenhouse gas emission neutral will be discussed in the context of the scoping and feasibility study on "A greenhouse gas-neutral Commission to be achieved as early as possible prior to 2050" that DG CLIMA is currently supervising (final report planned for September 2020).

³ Offset is achieved through carbon offsetting, which is a mechanism whereby an organisation compensates for its own Green House Gas (GHG) emissions or for a part of them by paying for an equivalent carbon dioxide saving made elsewhere in the world, for example emissions savings made through wind farms that replace coal-fired power plants. If all the emissions that cannot be avoided are offset, an activity can be considered to be 'carbon neutral'. Carbon offsetting should not be confused with the European Union emissions trading system (EU ETS), which is a mandatory cap and trade system of GHG emission allowances for heavy energy-consuming activities. It should also be noted that the European Emission Trading System covers CO2 emissions from flights in 31 countries (all 28 EU countries plus Iceland, Liechtenstein and Norway). See: https://ec.europa.eu/clima/policies/transport/aviation en. The ETS as a cap and trade system does not compensate the emissions of the covered flights.

 $^{^{4}\,\}underline{\text{https://www.dehst.de/EN/carrying-out-climate-projects/business-trips-of-the-german-government/business-trips-of-the-german-government/business-trips-of-the-german-government/business-trips-of-the-german-government/business-trips-of-the-german-government/business-trips-of-the-german-government/business-trips-of-the-german-government/business-trips-of-the-german-government/business-trips-of-the-german-government/business-trips-of-the-german-government/business-trips-of-the-german-government/business-trips-of-the-german-government/business-trips-of-the-german-government/business-trips-of-the-german-government/business-trips-of-the-german-government/business-trips-of-the-german-government-node.$

⁵ Also available at https://www.dehst.de/SharedDocs/downloads/EN/publications/Factsheet_business-trips.pdf?
https://www.dehst.de/sharedDocs/downloads/EN/publications/Factsheet_business-trips.pdf.
https://www.dehst.de/sharedDocs/downloads/EN/publications/Factsheet_business-trips.pdf.

 $^{^{6}\,\}underline{\text{http://www.europarl.europa.eu/about-parliament/files/organisation-and-rules/environmental-management/en-epenvironmental-statement-2018.pdf}$

The above governments and organisations have developed criteria ensuring high quality offsets that are verified under a recognised scheme to make sure that emission reductions are additional (i.e. excluding reductions that would have happened anyway), permanent and not double-counted.

This proposal recommends that the Commission implements the best solutions for ensuring carbon neutrality of business trips that have already been developed and successfully applied by other organisations. It details the steps and principles of such implementation and assesses the costs (deemed to be less than 2% of the total annual mission costs), which will be largely compensated for by the overall reduction of business trips.

2. Specific proposal

A European Commission decision should be adopted to Avoid, Reduce, Offset and Greenovate the climate impact of its employees' business trips as part of the transition to climate neutrality. The decision should be based on the following building blocks.

1/ Apply a climate policy principle: avoid – reduce – offset - greenovate

AVOID unnecessary business trips by the increased use of video and telephone conferences.

As good practice, the mission authorising officer should request evidence justifying the need for a mission.

REDUCE, by promoting rail travel, travel in economy and more direct routes.

Ideally the Commission's Mission Rules should be adapted to take the carbon footprint as a criterion on top of the financial one, and should promote the use of lower emission travel means (e.g. train instead of plane; direct flight instead of indirect flights) whenever practical and even if reasonably more expensive⁷. EEA experience is that this does not lead to any increase of the overall mission budget.

A policy should be put in place to incentivise a wider use of economy travel, such as the right to 1-day recuperation for overnight flights taken in economy. The overall savings from travelling economy would offset the economic cost of having staff inactive for 1 day⁸.

Budget mission allocations per DG and/or per directorate within a DG should not only be based on the economic cost of a mission but also on thresholds in terms of CO2 emissions. CO2 emissions can be calculated by the travel agency when submitting travel offers, and integrated in MIPS application.

Such a policy will allow the choice of the most CO2-efficient routes and class/detailed arrangements. It will make staff sensitive to the CO2 impact of their travel.

The Avoid and Reduce dimensions should be steered by yearly reduction objectives in line with or more ambitious than the Commission's objectives to reduce greenhouse gas emissions by 50 to 55% by 2030.

⁷ See EEA Mission Rules slightly adapted from the Commission rules

⁸ The average cost of a Commission official as calculated by DG BUDG's RUF is about 148 k EUR, which is about 88 EUR/hour

OFFSET the remaining, unavoidable emissions caused by the mission.

Based on EEA experience, air travel is the main means of travel requiring offsetting. Business cars and train can be compensated as well. EEA also recommends compensating hotel stays, which account for up to 10% of the mission footprint.

This implies that the legal basis for the relevant administrative budget is adapted. In a recent meeting of the EMAS Steering Committee it was noted that the current legal basis for the Commission budget would not allow the financing of offsetting projects. The European Parliament has solved the problem by adding a commentary of a few words to its budget line referring to staff's business trips¹⁰.

 GREENOVATE. As new climate-neutral technologies in the aviation industry, and negativecarbon options in the off-setting sector, become available the Commission should give priority to these in its procurement. This will contribute to support a competitive, futureproof European industry.

A mere offsetting can only be a temporary solution for a system to render Commission business-trips carbon-neutral. Such a system also has to keep looking out for efforts by air lines to implement new low-carbon technologies (such as climate-neutral synthetic fuels), or other efforts to reduce the emissions from the air travel (such as reducing air speed, electrifying taxiing).

As these technologies mature and become commercially available, a Commission climate-neutrality policy should also consider rewarding such efforts in its procurement, thus encouraging the low-carbon innovation whose development we also support in our R&I policies.

In the climate-neutral world that we need to achieve, the only offsetting must come from negative emissions¹¹, not from a reduction in other places. In the off-setting sector, we can expect to see offers of negative emissions (= carbon-removal) in the future; therefore, the Commission needs to aim for continuous improvement in the type of offsets that we purchase. The initiative's name: "avoid-reduce-offset-greenovate" resonates well with DG GROW's policy objective of a competitive, future-proof European industry.¹²

⁹ See EEA travel agent tender specifications delivering carbon offset scheme to allow all EEA's travel and accommodation to be carbon neutral and provision with suitable reporting and certification.

¹⁰ The following commentary is associated to the European Parliament administrative line related to staff missions: "This appropriation is also intended to cover any expenditure on carbon offsetting relating to staff missions and duty travel".

¹¹ Today already possible, e.g. a technological option with https://climeworks.shop/, but very expensive (1000 Euro/t CO2).

 $^{^{12}}$ Admittedly, the 'greennovate' part has some practical challenges that need to be addressed in the procurement framework:

^{1.} Priority in the search for a business flight is the connection, rather than which airline and its decarbonisation strategy. `Greennovating' calls for being more specific: where possible limit searches to connections undertaken by airlines which employ X% of synthetic aviation fuel usage across their fleet and/or to connections undertaken by airlines which have, e.g., the 5 highest CO2 emissions reductions (when assessing (part of) the basket of measures they employ to this end). The specifications would need continuous update as, for instance, next gen tech (e.g. hybrid-electric engines) are employed in commercial aircraft.

^{2.} We could possibly extend this to connections to and from airports that employ Airport Carbon Accreditation (ACA, https://www.airportcarbonaccreditation.org/about.html), but that adds a layer of complexity.

^{3.} It is important to identify "early movers, i.e. airlines that have credible decarbonisation strategy in place" in order to avoid rewarding greenwashing. In fact, today, given the overall same technology, the relative difference between airlines is minimal. So this needs to be based on objective data, e.g. operators that actually invest/procure sustainable biofuels (e-fuels in the hopefully not too distant future).

2/ Calculate emissions following state-of-the-art principle¹³:

- For air travel, emissions should be calculated on the actual individual air travel sections and take into account to the extent possible the non-CO2 greenhouse gas effects at high altitudes (due to water vapour, nitrogen oxides and carbon black particle emissions)¹⁴
- For business trips by car and taxi, emissions are determined by the fuel consumption in conjunction with emission factors for different fuels.

The Commission already measures the carbon emissions of the staff business trips using the work of the NGO Atmosfair. However, the emissions due to external participants to Commission meetings are currently not assessed.

3/ Define criteria ensuring a top grade offsetting scheme¹⁵:

- Experienced organisations recommend¹⁶ not only to follow the UN CDM (Clean Development Mechanism) standard but also the international Gold Standard certification.
- The criterion of not limiting ourselves to CDM projects ensures the additionality¹⁷ of the climate protection projects financed via the offsetting.
- The Gold Standard ensures high quality projects with additional co-benefits such as local sustainable development.
- In addition, in order to protect the Commission against accusations of 'green-washing' it is recommended to purchase offsets issued after 2017, which are supported by WWF and other international NGOs and are recognised as best practice standard.

The organisation providing such eligible carbon offset projects can be a dedicated entity working for PMO or a subcontractor of the Travel Agency¹⁸.

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¹³ This is in line with the methodology adopted by the Commission on 7th November 2017 to calculate carbon emissions in response to the European Court of Auditor (ECA) 2014 special report on the subject. American Express travel Agency already reports CO2 emissions for air train and hire cars, as calculated by Atmosfair who uses an approach developed with the German environmental authorities.

¹⁴ The science on non-CO2 effects is evolving and may lead to higher CO2-equivants (and thus costs) for offsetting in the future, depending on the research results. The German Federal Environmental Protection Agency (UBA) has commissioned an expansive study on non-CO2 (still on-going), looking at the different impacts of flightpath, altitude/latitude, and weather conditions. Completed research (e.g. https://www.atmos-chem-phys.net/19/8163/2019/) suggests that contrails are more damaging than previously thought. Also DG CLIMA, together with DG MOVE, is in the process of commissioning a study on Non-CO2. An interim report is expected in December 2019 with the final report in April 2020.

¹⁵ More details on the best practices and impact of the recommended carbon offset mechanisms can be found here: stipulating e.g. that "In aviation, offsetting calculations are particularly important. The impact of aviation on the climate is not restricted to CO2 emissions. Nitrous oxides, soot particulates and water vapour all contribute to the warming of the atmosphere. According to estimates by the German Environment Agency (UBA), the total climate impact of aviation is at least three times higher than the effect of its CO2 emissions alone."

¹⁶ This is the approach followed by both the German Federal Government and the EEA. The study "How additional is the CDM" that DG CLIMA commissioned in 2016:

https://ec.europa.eu/clima/sites/clima/files/ets/docs/clean_dev_mechanism_en.pdf; From its chapter 5. How additional is the CDM?, page 152: "85% of the covered projects and 73% of the potential CER supply have a low likelihood of ensuring environmental integrity (i.e. ensuring that emission reductions are additional and not over-estimated). Only 2% of the projects and 7% of potential CER supply have a high likelihood of ensuring environmental integrity."

¹⁷ I.e. the emissions reductions would not have been carried out anyway without the project.

 $^{^{\}rm 18}$ This is the approach taken by EEA.

4/ Obtain Carbon Offset certificates

These should be obtained from the entity purchasing the Carbon Offset project.

5/ Stepwise implementation

Carbon emissions from trips by experts or Member State representatives participating in meetings organised by the Commission¹⁹ should also be offset by the Commission when not already compensated under national carbon offset systems. Unlike other institutions such as the European Parliament and the EEA, the Commission's EMAS evaluation does not measure these indirect emissions; however, they are most likely superior to those of the Commission staff itself. A comprehensive policy for a carbon-neutral Commission must cover these emissions too.

3. Positive Impact

Carbon footprint reduction

Based on the areas currently measured, the total Commission's carbon footprint (123,000 tons of CO2eq in 2017) consists of the following main contributors (ranked from most important to least important, see Annex 1 for more detail):

- 1. Staff business trips (47,000 Tons 93% of which from air travel)
- 2. Buildings heating (41,500 Tons)
- 3. Staff commuting (14,250 Tons)
- 4. Building electricity (11,700 Tons)

As part of a general strategy to achieve carbon neutrality in the years to come, offsetting its employees' business trips will drastically reduce the average carbon footprint of the organisation expressed in equivalent CO2 emission per full time equivalent (CO2eq/FTE).

The achievable carbon footprint reduction is:

- 47,000 Tons of CO2eq per year
- A 40% reduction of the equivalent carbon footprint per staff (from 3.5 Tons to 2.1 Tons)
- In the most travel intensive sites and services, the reduction would be much higher (~5 Tons per staff).

Staff and public opinion

The various climate marches in 2018 and 2019 and the increased awareness about global warming indicates that such a policy would positively impact staff motivation and the image of the Commission as a whole. More and more staff members are making efforts in their private life to minimise their carbon footprint. At the moment, working for the Commission increases a staff member's carbon footprint by up to threefold; this creates frustration among many colleagues who are prevented from choosing more efficient and sustainable ways of working. Making the Commission an attractive employer means making our activities sustainable and climate-neutral; something the staff can be proud of.

¹⁹ EEA estimates this footprint to be even higher than for staff business trips

4. Various positions

European Commission

The Commission's current environmental policy²⁰ as signed by DG HR already identifies as objective n°2 "taking measures to reduce overall CO2 emissions (mainly from building and **transport**)" but currently the main reduction focus is for the fuel consumption of the Commission vehicle fleet, which represents a tiny contributor to transport-related CO2 emissions. On the Commission's website²¹, the Commissioner for climate action suggests that EU citizens consider voluntary offsetting in connection with flights, but there is no internal policy that goes in that direction.

Court of Auditors

The Court of Auditors has criticised the Commission's performance regarding its greenhouse gas emission policy in its report of 2014²². This highlights the "double" language of the Commission, which recommends actions to citizens and organisations but do not implement them itself. Conversely, the report praises the policy applied by institutions such as the European Parliament or the EEA.

Criticism of voluntary offsetting

Critics of offsetting schemes argue that they leave the public under the impression that it is possible to buy their way out of climate-protecting lifestyle changes at apparently low cost. This would, in the long-term, delay urgently needed changes in consumer behaviour. Such an understanding of the offsetting concept would indeed be highly questionable because offsetting, even when effective, does comparatively little to halt climate change. In addition, not all available greenhouse gas offsetting schemes are really effective. Offsetting should therefore only be used if activities cannot simply be modified to reduce or avoid greenhouse gas emissions. Under such circumstances, however, offsetting has two advantages. Firstly, voluntary offsetting of individual carbon dioxide (CO2)-intensive activities raises individual awareness of the emissions caused and their cost. Secondly, depending on their quality, offsetting projects may yield additional benefits for sustainable development in the host countries.

We should bear in mind that mere offsetting can only be a temporary solution for a system to render Commission business trips carbon-neutral.

5. Costs

Offsetting the climate impact of the Commission employees' business trips as part of a general strategy to achieve carbon neutrality would cost approximately **700,000 euros**²³.

These additional costs, which represent less than 2% of the total mission cost²⁴, could be balanced by the "avoid – reduce – offset" climate policy (avoiding unnecessary travel that can take place through video and teleconferences notably).

²¹ https://ec.europa.eu/clima/citizens/tips/mobility_en: Consider 'offsetting' the CO2 emissions of your trip. Many travel companies and other organisations will calculate your emissions footprint and invest a corresponding amount into a renewable energy or environmental project, for example.

²⁰ See Annex 1

²² Special 2014 Report "How do the EU institutions and bodies calculate, reduce and offset their greenhouse gas emissions?"

 $^{^{23}}$ This is based on the average offsetting cost observed in the EEA (~15 euros/Ton)

²⁴ Budget line XX 01 02 11 01

Administrative efforts are assessed to be 140 man-days²⁵. These efforts can be easily reduced to the strict minimum if the offset purchasing is done on a yearly or bi-yearly basis.

6. Communication issues

Offsetting the climate impact of its employees' business trips as part of a general strategy to achieve carbon neutrality would provide a nice communication opportunity for improving the Commission's image at a time of increasing concerns for the climate.

7. Evaluation

Impact: High / Feasibility: High / Innovation: Low

8. Possible application to EU-funded programmes

We do not have figures on the CO2 impact of travel as part of EU-funded programmes. The 'avoid/reduce/offset' approach should be applied to all EU-funded programmes. The approach should be embedded into proposals for EU-funding and reported upon by the partner(s). Minimum requirements should be included in travel rules.

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²⁵ Based on EEA administrative efforts extrapolated to the Commission

Annex 1 - extract from the Commission 2018 EMAS Statement²⁶



EMAS ENVIRONMENTAL POLICY

In 1997, the European Commission started a program of green housekeeping and, subsequently in 2001, decided to pilot the environmental management system EMAS¹ which allows organisations to participate voluntarily in a Community based eco-management and audit scheme (EMAS).

In 2009, the Commission decided to extend the environmental management system to all its activities and buildings in Brussels and Luxembourg. In making this commitment the Commission recognised the positive contribution it can make to sustainable development in the long-term, through its policy and legislative processes, as well as through its day-to-day operations and decisions.

In 2013, the Commission decided to progressively extend the EMAS to all the research centers of the Joint Research Centre located in Petten (the Netherlands), Geel (Belgium), Karlsruhe (Germany), Seville (Spain) and Ispra (Italy), and to the Commission services located in Grange (Ireland). This extension includes all research activities.

Consequently, the Commission commits to minimising the environmental impact of its everyday work and to continuously improve its environmental performance by:

- Taking measures to prevent pollution and to achieve more efficient use of natural resources (mainly energy, water and paper);
- (2) Taking measures to reduce overall CO2 emissions (mainly from buildings and transport);
- (3) Encouraging waste prevention, maximising waste recycling and reuse, and optimising waste disposal;
- Integrating environmental criteria into public procurement procedures and into the rules for organising events;
- (5) Complying with relevant environmental legislation and regulations;
- (6) Encouraging the sustainable behaviour of all staff and subcontractors through training, information and awareness-raising actions;
- (7) Progressively extending all the above to all its activities and buildings

And in relation to the Commission's core business by:

- (8) Systematically assessing the potential economic, social and environmental impacts of major new policy and legislative initiatives and promoting the systematic integration of environmental objectives into Community policies;
- Ensuring the effectiveness of environmental legislation and funding in creating environmental benefits;
- (10) Promoting transparent communication and dialogue with all interested parties, both internally and externally.

By virtue of the powers conferred on the Appointing Authorities, the European Commission's EMAS Steering Committee hereby approves this Policy Statement, commits to adopt the Commission's EMAS objectives, targets and action plan, to supervise the system's implementation and to monitor the use of its allocated human and financial resources in order to ensure that the environmental management system runs efficiently.

The Commission's EMAS-registered buildings are noted at the latest EMAS Environmental Statement available at: http://ec.europa.eu/environment/emas/emas_ec/Index_en.htm

This document shall take effect on the date of its signature, Brussels, 24th April 2014

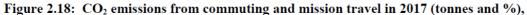
On Behalf of the EMAS Steering Committee,

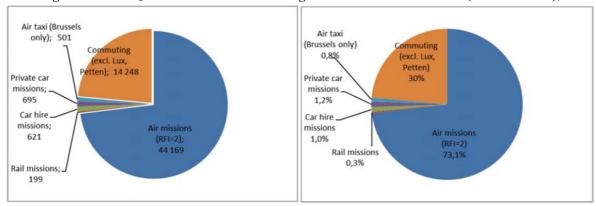
Irene Souka Chairman

²⁶http://ec.europa.eu/environment/emas/pdf/other/2018%2012%2007 ES%202018 Consolidated%20Volume.pdf

140 000 120 000 100 000 80 000 60 000 40 000 20 000 2014 2015 2016 2017 Total (CO2 + CO2e) 127 085 123 946 124 274 123 115 Staff commuting (contributing sites) 13 577 11946 12611 14 248 Missions other 1 664 1 973 2 027 2 017 Missions (air, RFI=2) 55 111 43 530 43 320 44 169 ■ Vehicle fleet - fuel consumption 813 822 869 804 ■ Buildings - coolant losses (CO2 e) 1 121 1 840 2 962 1 184 Buildings - district heating/cooling 3 517 6 630 7 036 7 437 ■ Buildings - electricity 14 025 12 803 10 759 11694 ■ Buildings - fuel for heating 37 257 44 403 44 691 41562

Figure 2.11: CO₂ or equivalent emissions generated by the Commission 2014 to 2017 (tonnes)





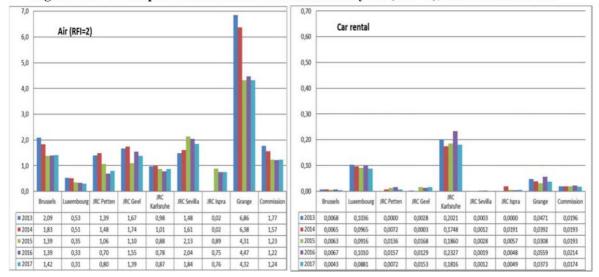
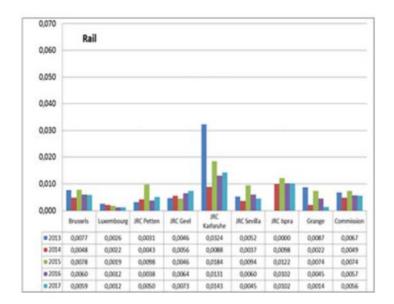


Figure 2.19: Per capita emissions for air for missions by air (RFI=2), car rental and rail 27



Annex 2 – Factsheet: The German Federal Government case²⁷

The German Federal Government's Business Trips are Climate-neutral



The German Federal Government was offsetting the climate impact of its employees' business trips for the 2014-2017 legislation period. This meant that the emissions were compensated for elsewhere by acquiring and surrendering emission allowances from prestigious climate protection projects. Allowances were obtained from projects that were certified according to UN rules for environmentally friendly development under the Clean Development Mechanism (CDM).



The German Emissions Trading Authority (DEHSt) at the German Environment Agency supports the German Federal Government by calculating emissions, selecting climate protection projects, and acquiring and surrendering CDM certificates (also known as Certified Emission Reductions, CERs). The compensation of greenhouse gas emissions from the Federal Government's business trips is an important climate policy signal and is an example to be followed by private stakeholders, companies and public institutions.

Avoid - Reduce - Offset Travel

The Federal Government follows the climate policy principle: avoid – reduce – offset. Business trips are avoided by the increased use of video and telephone conferences. In general, the number of business trips is reduced when it is decided whether the trip is necessary at all. Furthermore, rail travel is preferred. The Government acquires 'green tickets' for rail travel for which there is currently no compensation. The remaining, unavoidable emissions caused by business car journeys or air travel must then be offset.

Emissions from business trips by cars are determined from the fuel consumption and fuel-specific emission factors.

A key element is the inclusion of additional climaterelevant, non-CO₂ impacts (such as water vapour, nitrogen oxide and soot particle emissions) in aviation. The climate-relevant total emissions caused by air travel can be determined from this data pool.

The first years of compensation in figures

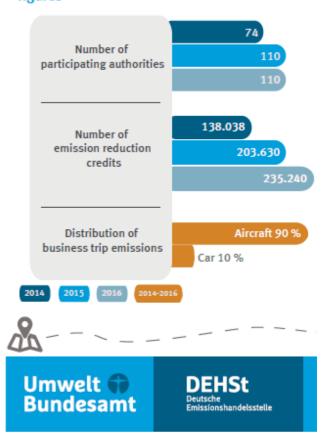


Image source: © kalafoto/Fotolia

 $^{^{27}}$ This factsheet is from 2017. The EMAS report by the German Environmental Protection Agency of Nov. 2018

Project Examples

Project type:

Household biogas from biomass

How a biogas plant works:

Instead of the widespread disposal of animal and other faecal matter in open manure pits, biogas plants treat excrement in closed tanks in the absence of air and provide the farms with the biogas, i.e. methane produced for cooking. The original, smokey cooking systems using

coal can thereby be replaced. This also often provides health improvements. In addition, a high-quality fertiliser remains after fermentation that can replace chemical fertilisers.



Image souther Ul

Project type:

Power generation from crop residues

How a biomass power station works:

Small-scale farmers can supply such a power plant with their crop residues and securing an additional income by selling the formerly useless waste to the plant operator.

The crop residues are burnt and heat a steam boiler to generate steam. This steam drives a turbine and a generator to generate electricity which is fed into the regional electricity grid.



image source: stmosla

High-quality and Plausible Climate Protection Projects are More Than Just Emission Reduction!

Only projects from the CDM are used. This ensures a certification of emission reductions under the umbrella of the applicable UN rules. Project assessments in the CDM in particular include the confirmation of additionality: whether emission reductions would not have been achieved without the CDM project considered.

The primary objective of compensation is off-setting by using emission savings elsewhere. Therefore, all projects meet the requirements of a proven emission reduction. In doing so, we are focusing on projects that go beyond pure CO₂ reduction and have additional, sustainable added value for the countries participating in the project (called co-benefits).

Co-benefit examples include:

- Increasing jobs in the area
- Local training and environmental education
- Support for local utilities
- Increasing a decentralised rural electrification rate
- Preservation of biodiversity
- Protection of natural resources, e.g. reducing deforestation rate
- Health protection, e.g. by eliminating smokeintensive burning
- Additional income

GENERAL PROCESS FOR BUSINESS TRAVEL COMPENSATION BY THE FEDERAL GOVERNMENT

National and international providers may offer us certificates from one or more CDM projects within stipulated deadlines when an intended certificate acquisition is publicly announced. We then evaluate the offers based on the existing criteria and make a selection. The selected certificates from the projects are then acquired and irrevocably deleted in the German Kyoto registry.





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(https://www.umweltbundesamt.de/sites/default/files/medien/1410/publikationen/190107_uba_fb_emas_bf. pdf (not available in English)) says that today also GHG emissions from the Federalgovernment's rail travels are offset.