

Frequently asked questions (FAQs)

How could the concept of an "overall mitigation in global emissions" (OMGE) be operationalized under the Paris Agreement?

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June 2019

Article 6 and OMGE

Currently, international carbon market mechanisms operate under the rules set by the Kyoto Protocol and are in principle a zero-sum game for the atmosphere – meaning that no net reduction of global emissions occurs as a result of transfers between Parties. A ton of greenhouse gas emissions is reduced in one place, and the international transfer of these reductions allows emissions to increase by the same amount in another place. This flexibility helps to reduce the cost of mitigating climate change. If countries adopt more ambitious climate targets due to these cost savings, carbon markets could thereby help lower greenhouse gas emissions.

The Paris Agreement's Article 6 establishes a new framework for using international carbon market mechanisms. The primary objective of the approaches under Article 6 is to facilitate voluntary cooperation between Parties, to allow for higher ambition and to promote sustainable development and environmental integrity. Providing flexibility or reducing costs are not mentioned as objectives. Moreover, Article 6.4 establishes the concept of delivering an "overall mitigation in global emissions" (OMGE).

This paper addresses questions that have been raised in relation to OMGE. It draws on a study conducted by Lambert Schneider and NewClimate Institute.¹ The paper focuses on emission reductions that are generated within the scope of nationally determined contributions (NDCs), given that all countries should move over time towards economy-wide targets.

What does an "overall mitigation in global emissions" mean?

Article 6.4 establishes a new crediting mechanism under international oversight. Under this new mechanism, public and private entities can implement emission reductions activities and be issued offset credits that they can sell to different buyers. A specific requirement of this mechanism is that it "shall aim (...) to deliver an overall mitigation in global emissions".

In international negotiations, countries have not yet reached agreement on how best to operationalize this requirement. A possible working definition for OMGE could be that it is achieved when carbon market mechanisms go beyond a zero net impact and directly low-

¹ Schneider, L.; NewClimate Institute, 2018: Operationalising an 'overall mitigation in global emissions' under Article 6 of the Paris Agreement. <https://newclimate.org/wp-content/uploads/2018/11/Operationalising-OMGE-in-Article6.pdf>

er global emissions. This occurs if a portion of the emission reductions achieved through carbon markets is used neither by the seller nor by the buyer toward achievement of its own NDC or climate mitigation goals.

Why is delivering an OMGE important?

The Paris Agreement provides a new framework for the global effort to address climate change. Under the agreement, both developed and developing countries must communicate NDCs every five years, in a context in which Parties have adopted the long-term temperature goal of holding average global warming to well below 2°C and pursuing efforts to limit warming to 1.5°C. The IPCC's Special Report "Global Warming of 1.5°C" makes clear that deep emission reductions are urgently needed in all sectors and countries to achieve this goal and to minimize climate impacts.

At the same time, studies indicate that neither the domestic policies that are now in place, nor the cumulative mitigation efforts contained in Parties' NDCs under the Paris Agreement, are at a scale that will reduce global emissions consistent with achievement of this agreed temperature goal.²

The need for urgent and ambitious action in all areas calls for tools that go beyond providing flexibility to countries, and that directly deliver a contribution to lowering global GHG emissions. Negotiators in Paris understood this urgency and included the requirement for OMGE in the Agreement's text on Article 6. The text is simple and specifies that the mechanism "shall aim to (...) deliver an overall mitigation in global emissions".

How should OMGE be implemented?

Several criteria need to be fulfilled for Article 6.4 to achieve an OMGE. First, the mechanism will only result in an OMGE if a portion of the emission reductions achieved is not used to offset an equal volume of additional emissions elsewhere. It must be possible to properly quantify this portion so that it is clear that an overall mitigation in global emissions has been achieved. Second, this portion of the emission reductions must not be available to be counted toward the host country's NDC or towards the NDC of the country intending to use offset credits from the mechanism. And third, the approach must be mandatorily applied, or automatically triggered, to ensure that an OMGE is delivered. Only in this way the Article 6.4 mechanism itself delivers an OMGE. Implementing OMGE should not be a choice by individual Parties, because voluntary action cannot "ensure" an OMGE.

These criteria can be efficiently and effectively fulfilled by ensuring that the portion of the emission reductions that will deliver an OMGE follows the same route as all other emission reductions that are intended for transfer – but with one difference. After all emission reductions are monitored, reported and verified (MRV) with high scrutiny, they are issued into a registry in the usual way. At the time of initial issuance or first transfer from the registry, a percentage (X%) of these emission reduction units (the OMGE portion) is automatically directed to a cancellation account, with the rest of the emission reduction units issued to the entities involved in the activity. In this way, the portion of units that delivers an OMGE never enters into circulation. The host Party will have to make a corresponding adjustment for the full amount of emission reductions.

² For example: <https://climateactiontracker.org/>

Technically, the international body established by the Parties to supervise the Article 6.4 mechanism (hereinafter referred to as "supervisory body") could issue emission reduction units first to an account under its control. At issuance or transfers, a fixed percentage is set aside to a dedicated OMGE cancellation account. Both the initial account and the OMGE cancellation account would be under the control of the supervisory body and outside the control of the host or acquiring Party, or other entities involved.

The Kyoto Protocol's Clean Development Mechanism (CDM) already provides a precedent for the technical framework needed to implement such an approach. The "share of proceeds" (SOP) for adaptation from CDM projects is collected in a similar way, providing the Adaptation Fund with a 2% share of all Certified Emission Reductions (CERs) that are issued.

Article 6.6 of the Paris Agreement calls for a similar SOP contribution "to assist developing country Parties that are particularly vulnerable to the adverse effects of climate change to meet the costs of adaptation". Accordingly, a coordinated and parallel process for the implementation of the SOP for adaptation under Article 6.6 and for the delivery of an OMGE under Article 6.4, based on the experiences and tools from the CDM, seems the most simple and effective option.

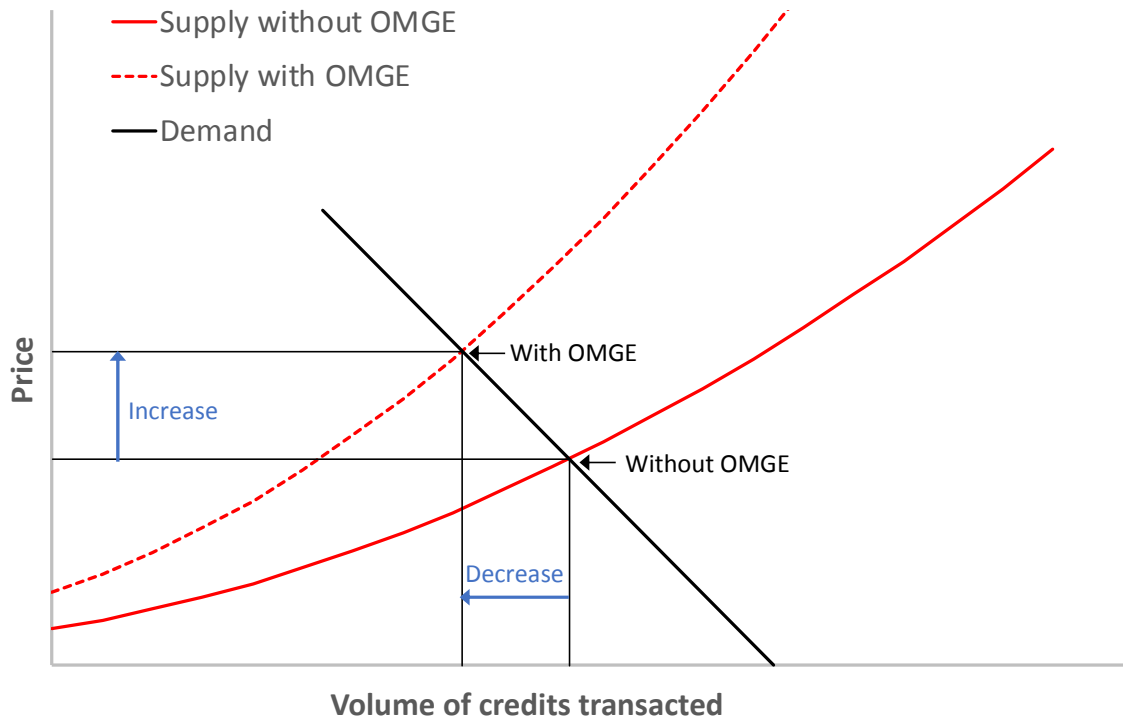
Most of the implementation options, as described in draft negotiation texts, do not have the ability to ensure an overall mitigation in global emissions, since one or several of the criteria (quantification, accounting, mandatory application) are not met. The discounting of off-set credits by the acquiring country could be a feasible alternative but faces some practical implementation issues.

Does a host country's "own benefit" contribute to an OMGE?

No. The Paris Agreement's Article 6.4 distinguishes between a contribution to the reduction of emission levels in the host Party in Article 6.4 (c) – also referred to as an "own benefit" of host countries – and an "overall mitigation in global emissions" in Article 6.4 (d). An emission reduction would only represent both a host country's "own benefit" and a contribution to OMGE if the host country does not have a mitigation target or if the emission reductions occur outside the scope of that target. But while such a situation did exist in the Kyoto Protocol regime, under the Paris Agreement all Parties have to communicate NDCs, which should become economy-wide over time. In this new context, a host country's "own benefit" would count towards the achievement of its NDC and therefore not deliver of an overall mitigation in global emissions.

How does OMGE affect the price and volume of offset credits transacted?

OMGE has two main effects for the market of offset credits: the price for offset credits increases and the volume of offset credits transacted may decrease. With a portion of the emission reductions being cancelled to deliver an OMGE, projects receive fewer offset credits for the same volume of verified emission reductions. Because they face the same costs for reducing emissions, this increases the costs of supplying offset credits, resulting in an upward shift of the offset credit supply curve (see Figure below).



The size of these effects depends on the OMGE rate – the fraction of offset credits that are cancelled for OMGE purposes – and the shape of the offset credit supply and demand curves. The higher the OMGE rate, the stronger the increase in credit prices and the fewer credits are transacted.

The demand for offset credits is likely to be relatively inelastic after 2020, meaning that the volume of credits transacted will not depend much on their price. Under the Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA), for example – for a large range of offset credit prices – it is likely to be substantially cheaper to purchase offset credits than using sustainable aviation fuels. This implies that the increase in offset prices is likely more pronounced than the decrease in the volume of credits transacted.

How does OMGE affect greenhouse gas abatement?

OMGE enhances global abatement beyond what countries pledged in their NDCs. Under a large range of circumstances, abatement is enhanced in both host countries and acquiring countries. Although it may not be immediately intuitive, more projects are implemented in host countries. This is enabled through higher credit prices, which outweigh the effect of projects receiving fewer credits for their emission reductions. OMGE would only lead to fewer projects being implemented if the OMGE rate were set very high (e.g. above 50%) or if demand were very elastic (responsive to price), which is unlikely to be the case. In some instances, abatement may also increase in acquiring countries, if higher credit prices make them pursue more domestic mitigation action and purchase fewer credits.

How does OMGE affect project owners?

OMGE is likely to affect project owners favourably. One might first think that OMGE is like a tax: a fraction of the offset credits is cancelled and no longer available to project owners. However, the implications of OMGE are quite different from a tax. While a tax adds an additional cost item, OMGE leads – under a large range of circumstances – to higher profits for project owners because the increase in credit prices outweighs the effect of receiving fewer credits. Also, more projects are implemented to meet the demand that exists.

How does OMGE affect host countries?

Host countries also benefit from OMGE because more investments in low carbon development would be financed through international carbon markets. Higher credit prices due to OMGE may also enhance the feasibility of more costly mitigation options, which are urgently needed to demonstrate feasibility of new technologies for a fast transition towards a low-carbon economy. Host countries could then use these previously infeasible technologies to help ratchet up the ambition of their future NDCs. Less abatement in host countries would only occur under very high OMGE rates (e.g. >50%) or if demand were very elastic.

How does OMGE affect the buyers of offset credits?

Offset credits are purchased by different entities: by governments to meet their climate targets, by companies to fulfil emission reduction obligations such as under emissions trading systems or under CORSIA, and by organizations or individuals for offsetting their emissions. These buyers finance the further abatement that is realized through OMGE by paying more for the offset credits.

However, the maximum possible increase in credit prices is limited and depends on the rate for OMGE. An OMGE rate of 20%, for example, could lead to a maximum price increase of 25%. Even if buyers have to pay more for offset credits, offset credits will typically lower their costs by doing so. A good example is CORSIA, where the costs of producing alternative aviation fuels are considered to be higher than the costs of purchasing offset credits at prices observed over the past 20 years.

Will OMGE lead to inflated baselines?

No. Under crediting mechanisms, baselines are established based on methodological standards and cannot be arbitrarily determined by project owners. Moreover, any incentives for project owners to try to inflate baselines are not increased through OMGE, as OMGE leads – under plausible scenarios – to higher profits for project owners. If host countries have ambitious NDC targets, they also have incentives to ensure that emission reductions from projects are not over-estimated because under the Paris Agreement, host countries need to account for internationally transferred offset credits. They may risk failing to achieve their NDC target if too many credits are issued, because they have to add any transferred emission reductions to their own emissions in order to avoid double counting. As a result, inflating baselines for offset projects will only make it harder for countries to achieve their NDCs.

What rates for OMGE are reasonable?

In selecting an appropriate rate for OMGE, policy-makers have to balance the benefits in terms of enhanced abatement with the increased costs for the buyers. Within a broad range of assumptions, higher rates lead to more abatement, more benefits for project owners, and larger financial flows, but also involve higher costs for buyers. A further consideration is that the overall cost-effectiveness of mitigating climate change decreases with higher rates. The rate is a policy choice. We recommend, however, selecting a rate that does not exceed 50% as this could more likely result in adverse impacts. Very low rates – e.g. a few percentages – would, on the other hand, not have much effect in terms of enhancing abatement.

Under which circumstances should OMGE be applied?

OMGE is introduced in the Paris Agreement as a requirement for the new crediting mechanism established under Article 6.4. If OMGE were only implemented under this new crediting mechanism, but not for other crediting mechanisms that compete in the same markets, this could lead to market distortions. Implementing projects through other crediting mechanisms would then become economically more attractive than using the Article 6.4 mechanism. This holds in particular for markets like CORSIA where different programs are expected to become eligible and compete for projects. We therefore recommend that policy-makers create a level-playing field between crediting mechanisms by implementing OMGE consistently, either for all uses of offset credits or at least for specific compliance purposes, such as towards NDCs or towards CORSIA.

Implementing OMGE for international transfers resulting from the linking of emissions trading systems involves a number of political and technical challenges. Policy-makers could therefore consider implementing OMGE only for crediting mechanisms but not for international linking of ETSs. This might also make the concept politically more acceptable outside the boundaries of the Article 6.4 mechanism.

Under Article 6.2, OMGE would need to be implemented under the responsibility of the participating Parties. As for the Article 6.4 mechanism, a fraction of the offset credits could be cancelled, and accounting rules would need to ensure that the host country applies a corresponding adjustment for all offset credits issued, while the buyer country would apply a corresponding adjustment for the number of credits acquired or used towards its NDC.

Why is OMGE an opportunity under the new context of the Paris Agreement?

A key benefit of OMGE is that it may enhance the acceptability of using international offset credits. Many stakeholders have levelled the criticism that the idea of only offsetting emissions is not sufficient, in the light of the ambition of the Paris Agreement and the urgency needed to reduce emissions, as laid out in IPCC's Special Report "Global Warming of 1.5°C". Some stakeholders also have questioned the extent to which countries actually increase the ambition of their mitigation targets as a result of access to international carbon markets. The use of offset credits may therefore be more widely accepted if it is clear that this use will directly lower global emissions in a quantified manner.

Similar concepts have been proposed and implemented in other contexts. The American Clean Energy and Security Act of 2009, commonly referred to as the Waxman-Markey bill,

stated that an entity in a national emissions trading system for the United States would need to turn in 1.25 tons of offsets for a compliance obligation of one ton. Similarly, France introduced a general 10% discount on domestic Joint Implementation projects, implying that only 90% of the resulting emission reductions would be issued as emission reduction units.

Lastly, with all countries adopting more and more ambitious targets over time, the role of crediting mechanisms may also change. Countries may no longer wish to sell their "low hanging fruits" but instead may wish to use crediting to finance transformational change that brings their economy onto low carbon development. These activities may be costlier and their realisation through international carbon markets needs higher market prices over time. At the same time, buying countries will also face increasing abatement costs and may be willing to pay more to become carbon neutral.

Are there benefits for countries that are not participating in markets?

Countries that do not participate in markets also benefit from overall mitigation. If fewer emissions go to the atmosphere, they save costs as they are less affected by climate change. Every ton of net global emission reductions lower the costs associated with climate change.

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Underlying study

Schneider, L.; NewClimate Institute, 2018: Operationalising an 'overall mitigation in global emissions' under Article 6 of the Paris Agreement. <https://newclimate.org/wp-content/uploads/2018/11/Operationalising-OMGE-in-Article6.pdf>