ISO 14068-1:2023

Climate change management – Transition
to Net Zero – Part 1: Carbon neutrality

Executive briefing

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Contents

Overview

Climate change is one of the most urgent issues of our time. To avoid the worst effects and keep the rise in global temperatures to no more than 1.5°C, the Intergovernmental Panel on Climate Change (IPCC) of eminent scientists has identified that we need to cut emissions of greenhouse gases by 40% in this decade and to global net zero by 2050.

Governments are able to set policies, but it is organizations – in both the private and public sectors – that have to take action. However, working towards a long-term target of net zero can be difficult without recognition of achievements along the pathway. That's where carbon neutrality can help; organizations that have a clear plan and have started making real greenhouse gas (GHG) reductions can counterbalance their unabated GHG emissions (their remaining carbon footprint) using high quality carbon credits (sometimes known as carbon offsets) to achieve carbon neutrality. Using high quality carbon credits is intended to result in measurable, additional GHG reductions over and above those made by the organization itself, and can contribute valuable financing for projects in developing countries.

ISO 14068-1 is a new International Standard that sets out requirements for organizations wishing to achieve carbon neutrality, including for products (such as goods, services or events) made by the organization. It is designed to work with either ISO's own quantification standards or other equivalent protocols. ISO 14068-1 provides a rigorous and robust framework avoiding greenwash, and builds on the 15 years' experience of BSI's own carbon neutrality document, PAS 2060. Consumers can be confident that claims made in accordance with ISO 14068-1 are meaningful.

ISO 14068-1 may be used by any organization, large or small, in any sector. It requires that all greenhouse gases are considered not just carbon dioxide and that a full value chain or life cycle approach to GHG emissions is used where possible. In this briefing (and in the standard) the abbreviation GHG is used to represent all the gases that contribute to damaging climate change.

Who is the standard written for?

ISO 14068-1 can be used by any entity that is seeking carbon neutrality at either an organizational or product level.

Organizations can range from large companies to sole traders, and may be for profit, charitable or public authorities. It can be used in any industrial or commercial sector, including manufacturing, retail, transportation and offices and may be applied within a single country, or internationally. It is not intended for use at the territorial level, but a local council, for example, could apply the standard to its own operations. If organizations are applying carbon neutrality across only some of their activities, they have to explain the rationale for omissions, to avoid cherry-picking the parts deemed easy to neutralize.

Products may be physical goods or services including events and services offered by financial institutions, which are the subject of an Annex.

The standard could also be useful to civic society bodies, such as NGOs, wishing to determine if a claim of carbon neutrality made by an organization is supported by proper evidence.

Benefits of using the standard

Organizations using the standard will benefit in two main ways: internally, through having a clear guide on best practice in reaching carbon neutrality; and externally, by demonstrating compliance with a rigorous standard on carbon neutrality.

The standard provides clear principles that entities need to take into account when seeking carbon neutrality. These include establishing a hierarchy, so that GHG emission reductions are made first – and reductions are often the most cost-effective way of reducing a carbon footprint, avoiding the need for potentially costly carbon credits. The hierarchy is then used to determine a pathway to carbon neutrality, including short- and long-term targets for minimizing the carbon footprint. The standard also explains how the pathway is used in developing a detailed carbon neutrality management plan, which provides clear guidance for those responsible for the implementation of carbon neutrality.

In recent years, there have been many claims of carbon neutrality that are unsubstantiated or supported only by purchasing a few carbon credits, with a consequent risk of greenwashing. By following ISO 14068-1, organizations will be able to demonstrate that their claim of carbon neutrality is underpinned by real action to reduce GHG emissions and includes a clear pathway to eliminate all possible GHG emissions, so does not just fall back on purchasing carbon credits in the market. This significantly improves the credibility of a claim.
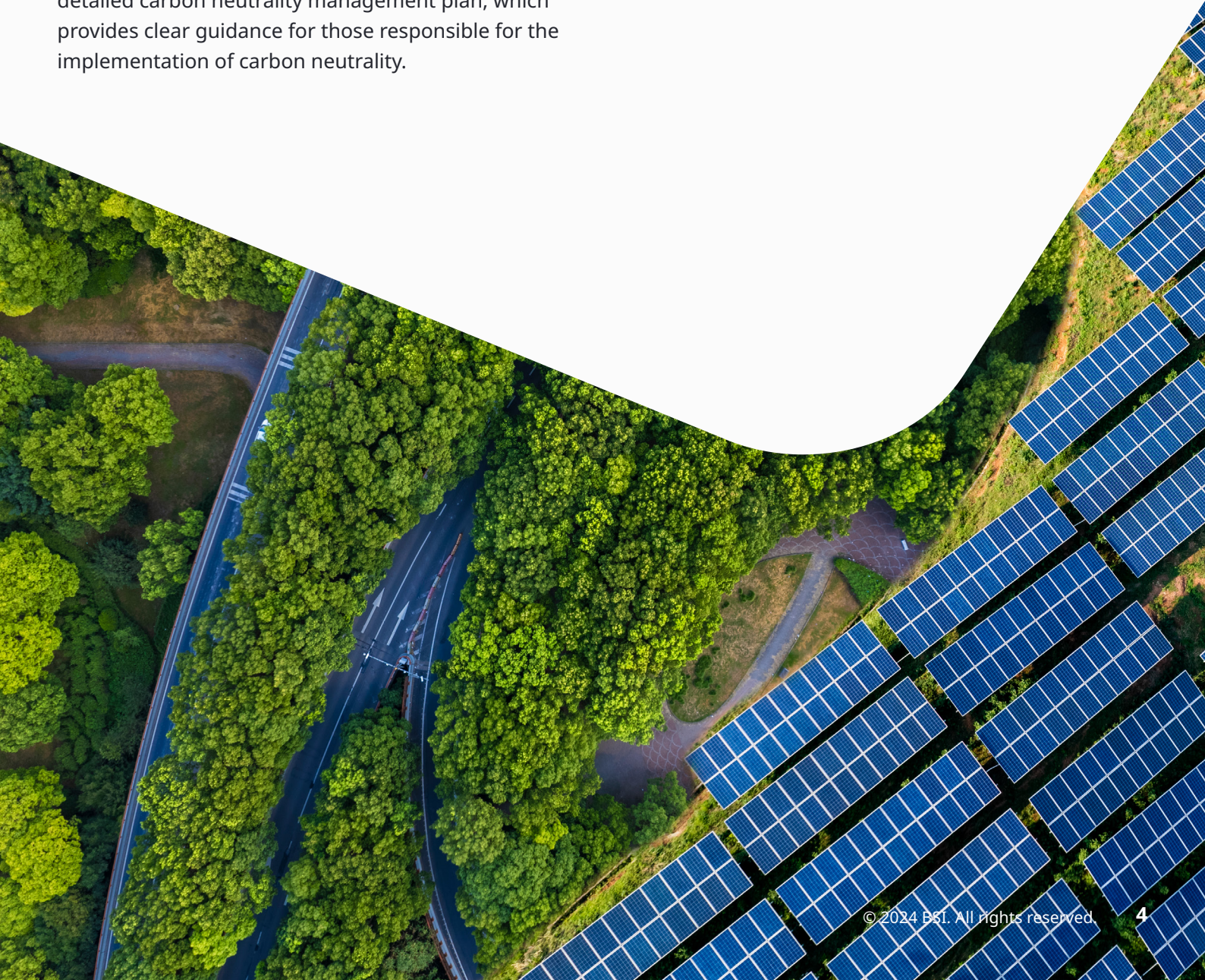
How to implement the standard

ISO 14068-1 leads users through a structured process, starting with ensuring that a commitment is made by senior management to achieving and maintaining carbon neutrality; it should not be a one-off exercise. This includes setting the level of ambition, which may be higher if there are faster reductions to GHG emissions.

The next step is to determine the subject of carbon neutrality, which may be the organization itself, or a product (goods or services).

After the subject is agreed, its carbon footprint needs to be quantified, taking into account all direct and indirect GHG emissions, and any GHG removals within the subject's boundaries. Direct emissions generally come from combustion of fossil fuels, or escapes of methane or refrigeration gases; indirect emissions include grid electricity, purchases of goods and services (including transport) and GHG emissions associated with the use of sold products. Although ISO 14068-1 encourages the use of other standards in the ISO 1406x series for quantification, it recognizes that there are other protocols available, or that there may be nationally mandated quantification methods.

Once the baseline has been established, providing a quantification of the carbon footprint, a carbon neutrality management plan is then drawn up. The plan includes short- and long-term targets, activities foreseen to make GHG reductions or GHG removal enhancements, and the selection of carbon credits. Indicators for monitoring its effectiveness are also required, as well as an assessment of available resources, both human and financial.

Before any claim can be made for carbon neutrality, it is then necessary to make GHG reductions compared to the baseline. Once the net carbon footprint is known for the reporting period, carbon credits have to be bought to offset that footprint. Only those credits that meet certain defined quality characteristics can be used, i.e. that they have safeguards against double counting and that demonstrate they represent real, additional, measurable and permanent reductions or removals. The entity can then claim carbon neutrality for the selected subject in the reporting period.

As carbon neutrality is an ongoing process, the steps are then repeated, updating the carbon neutrality plan as appropriate, and recalculating GHG emissions, reductions and the carbon footprint to offset in the next reporting period.

Challenges and pitfalls in using the standard

The most likely challenges that organizations will find are in the areas of data collection and maintaining momentum.

The quantification of the footprint is based on a life cycle or full value chain approach (including upstream and downstream processes). This includes indirect (Scope 3) GHG emissions from the product or organization, although a cradle to gate calculation is permitted for business-to-business products. Data for some indirect emissions can be hard to obtain or reliably estimate, although minor emission sources may be omitted.

Carbon neutrality should not be claimed for a single year, but is seen as part of an emissions reduction pathway. Although the standard recognizes year on year reductions are not always possible and, especially for products, there may be step changes in emissions reductions followed by periods of little change, these need to be in line with longer-term reduction targets. Organizations need to have real commitment to maintain momentum and not just to fall back on the easier option of continuing to buy carbon credits.

How does this relate to PAS 2060?

Some users will be familiar with PAS 2060 Carbon neutrality, which was first published by BSI in 2009 and revised in 2014.

The requirements of the new ISO Standard are very similar, although the detailed text, including some of the terminology, has been changed to reflect 15 years of successful use. Companies that have used PAS 2060 should have no difficulty transitioning to ISO 14068-1.

One slight difference is that ISO 14068-1 sets out more detailed provisions on the hallmarks of a high quality carbon credit, responding to concern that some offsets sold in the market may not achieve intended carbon savings. ISO

14068-1 also establishes some basic principles before describing the more detailed process of determining carbon neutrality.

There will be a period of 24 months from the date of publication of ISO 14068-1:2023 before the PAS 2060:2014 document will be withdrawn. This is to allow users to address changes that may be needed to meet the revised requirements detailed in the new ISO 14068-1:2023 standard.

The wider context

Carbon neutrality is not the same as net zero, owing to its reliance on carbon credits to counterbalance unabated GHG emissions.

However, it has an important role to play in the decarbonization journey, providing recognition for tangible steps taken to manage and reduce the footprint of an organization or product.

At an organizational level, as described in the ISO IWA 42 "Net Zero Guidelines", net zero is seen as the long-term target. To reach net zero, all technically and economically feasible reductions have had to be made, and only an historically low level of emissions (if any) remain to be offset using carbon credits. Carbon neutrality can therefore be seen as a progressive series of steps on the pathway to net zero, while there are still some possible GHG emission reductions that could be made, and the carbon neutrality management plan should identify the likely timescale for eliminating all GHG emissions.

Carbon neutral organizations or products, through the purchase of high quality carbon credits, can also help fund decarbonization elsewhere, including in less developed countries.

Over time, the need for this type of funding should decrease, just as the number of credits required to counterbalance the carbon footprint also falls.

The new ISO 14068-1 standard is designed to raise the bar for carbon neutral claims. It recognizes that there is a need to set high standards and encourage ambitious carbon reductions, removals and carbon credits if the world is to meet its global targets for net zero by 2050 and limit the rise in global temperature to 1.5°C as set out in the Paris Agreement.

Suggested next steps

- Read ISO 14068-1, to decide on the approach that would work best for your organization.

- Obtain the support of senior management to achieving carbon neutrality.

- Determine your scope and boundaries – will it be your entire organization, or restricted to (say) a single country, or would it be better applied to certain products?

- Consider the available resources, both financial and human. Where will you prioritize making GHG reductions, and how will you finance any necessary capital investment? Are there low cost or behavioural measures that can provide an easy win?

- Set a realistic date for reaching net zero. What would make good interim targets on the long- term pathway?

- Appoint a champion for carbon neutrality and the person who will have responsibility for quantifying the baseline (and annual) carbon footprints.

- Identify if there are any constraints on the use of carbon credits or offsets that might prevent you from claiming carbon neutrality.

Further reading

<u>ISO IWA 42:2022</u>, *Net Zero Guidelines.*

<u>ISO 14064-1:2018,</u> *Greenhouse gases — Part 1: Specification with guidance at the organization level for quantification and reporting of greenhouse gas emissions and removals.*

<u>ISO 14067:2018,</u> *Greenhouse gases — Carbon footprint of products — Requirements and guidelines for quantification.*

Defra (2009), **Guidance on how to measure and report your greenhouse gas emissions** *(Originally published in 2009, but supports the annual Government conversion factors for company reporting of greenhouse gas emissions*)

IPCC (2023), **AR6 Synthesis Report: Climate Change**

Voluntary Carbon Markets Integrity Initiative (2023), VCMI Claims Code of Practice

World Resources Institute & World Business Council for Sustainable Development (2020), **Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard** *— Revised edition*

World Resources Institute & World Business Council for Sustainable Development (2011), **Greenhouse Gas Protocol Product Life Cycle Accounting and Reporting Standard**

Standards at the Heart of Everything: *Implementation Guide.*

About the author

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Ian Byrne is a Chartered Environmentalist and Chartered Accountant with 34 years' experience in energy efficiency, enewables and carbon management. His consultancy, IBECCS Limited, identifies practical and cost-effective solutions for mainly smaller organizations to save energy and combat climate change. Ian has been a UK expert on CEN and ISO committees for 15 years and was convenor of ISO 50047:2016, "Energy savings — Determination of energy savings in organizations"., for which he received an ISO Excellence Award. Ian is currently convenor for the group that has written ISO 14068-1:2023, "Climate change management — Transition to net zero —. Part 1: Carbon neutrality" and chairs the BSI mirror committee on GHG Mitigation and Adaptation.

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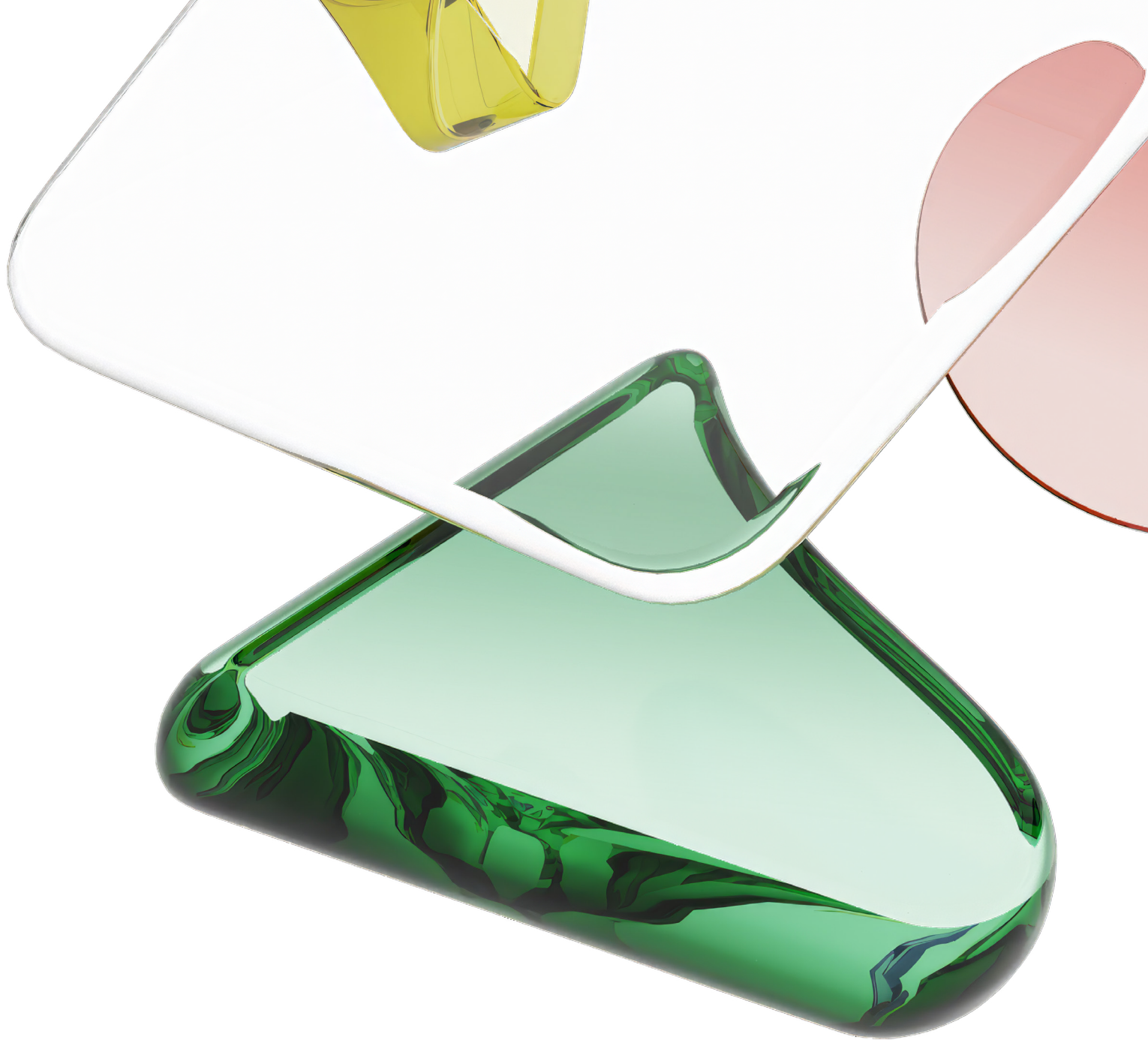
About BSI

We shape and embed best practice so that your organization can become future ready. We have not only committed to achieving net zero by 2030, but BSI is instrumental in the 'Our 2050 World' collaboration as its convenor, that brings the International Organization for Standardization (ISO), the UN Race to Zero campaign and the UNFCCC Global Innovation Hub together to enable and mainstream the transition to net zero through standards. The London Declaration, led by BSI, working with the ISO, is a commitment to ensure global standards will support climate action and advance international initiatives to achieve global climate goals.

We are equipped to transform your net zero journey through access to unrivalled expertise.

For more information, or to get in contact with one of our experts, visit bsigroup.com

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