Novel Technologies to Reduce Greenhouse Gas Emissions During Packaging Production

PepsiCo has set out to achieve a 40% reduction in greenhouse gas (GHG) emissions by 2030. Many of their packaging types are already considered recyclable (e.g., PET bottles, aluminium cans, glass packaging). But to reach their goals they must reduce greenhouse gas emissions over the course of the packaging’s entire lifecycle.

PepsiCo are seeking technologies that will reduce GHG emissions during packaging production or over the entire lifecycle of PET bottles, aluminium cans, and glass packaging (and other types of packaging) without sacrificing packaging quality. Research with potential to complete proof of concept within 6-18 months is preferable.

Approaches of Interest:

- Highly functional materials, additives, or coatings that improve packaging properties (e.g., barrier, mechanical properties), and therefore, can enable light weighting
- Additives or coatings that reduce energy usage during packaging production resulting in lower GHG emissions
- Packaging production processes with reduced energy usage

Essential research requirements:

- Food safe materials (capable of achieving regulatory approval)
- Does not negatively impact recycling of package
- Clear and colourless (for PET bottles)

Preferred (but not essential) requirements: FDA food contact approved, cost parity with incumbent packaging, solutions for returnable and retort-ready glass packaging and, no impact on organoleptic or sensory attributes of contents.

Out of scope approaches: GHG reduction solely by conversation to renewable energy, traditional light weighting technologies, and any nonrecyclable materials.

Submission Information:

Submission of one page, 200-300 word briefs are encouraged, along with any optional supplementary information e.g., relevant publications and patents. In submitting to this campaign, you confirm that your submission contains only non-confidential information. Repeat submissions to PepsiCo should contain new research developments.

PepsiCo is open to a range of collaboration types with the most appropriate outcome determined on a case by case basis. Examples include licensing assets, project funding in the region of $25,000 to $100,000, and research collaborations with support provided by PepsiCo expertise.