Plastic End Markets for Films and Flexible Packaging Should Include Non-Mechanical Recycling to Expand the Range of Recycling Outlets for Difficult-to-Sort and Hard-to-Recycle Plastics

NEXUS CIRCULAR COMMENTS

Nexus Circular (Nexus) appreciates the opportunity to submit comments as a potential plastic end market on the Recycling Reform Act Draft Preliminary Needs Assessment. Nexus' comments are intended to provide Ecology with practical recommendations that enable a broader range of plastic types and formats, especially films and flexible packaging, to be recovered, recycled and returned to the supply chain and that harmonize with other state Extended Producer Responsibility (EPR) programs to enhance efficiency.

Section 8.3.1 **Plastics** defines "plastics end markets as reclaimers that process recovered plastic into recycled flakes or pellets" which limits the analysis of end markets to only mechanical recycling processes that "...sort plastics by resin type and, when needed, color. They then shred or grind the material and remove contaminants. Some facilities also use friction washing, density separation, and drying. Facilities produce recycled resin pellets by melting, filtering, and extruding prepared plastic." [1]

Section 8.0 **Current End Markets** confirms that established mechanical recycling infrastructure and facilities are well-designed to process rigid containers stating that "rigid PET and HDPE packaging formats have geographically accessible end markets" while also noting the "limited facility acceptance for plastic film, flexible packaging and polystyrene (PS) formats." [2]

Washington's Preliminary Needs Assessment of plastic end markets for films and flexible packaging correlates with the analysis by the Circular Action Alliance (CAA) for the California EPR Program Plan. The CAA concluded that mechanical recycling alone lacked the technical feasibility or capacity to process films, flexibles, and multilayer packaging generated in California. The CAA stated that "mechanical recycling may be considered a preferred recycling method due to its lower greenhouse gas emissions footprint and cost structure. However, mechanical recycling alone does not currently have the capacity or technical feasibility to recycle all plastics – particularly films, flexibles and multi-material packaging – or to recycle certain materials back into food or medical grade plastics. Non-mechanical recycling

[1] Washington Draft Preliminary Needs Assessment, page 64
[2] ibid, page 60

technologies can expand the types of plastics that can be processed and thus can complement mechanical recycling." [3]

Section 8.3.7 **Capacity Gaps and Constraints** states that "film and flexible packaging…may face additional market-access challenges because they often require cleaner bales, specialized processing, or separate collection and aggregation pathways." [4] As the processing requirements for recovered plastics vary by material type, format, feedstock condition, and intended end use, a broad range of end markets are necessary to recover, recycle and return a wider range of plastics to the supply chain. Non-mechanical recycling processes can recover plastics that are beyond the scope and capability of established mechanical recycling processes.

RECOMMENDED SOLUTION

Nexus encourages Ecology to 1) revise the definition of a plastic end market to "an entity that buys and reprocesses materials, converting them into recycled feedstock to replace virgin feedstock"[5] and 2) include non-mechanical recycling facilities and capacities as plastic end markets in the Full Needs Assessment in order to enable a broader range of plastic types and formats, especially films and flexible packaging, to be recovered, recycled and returned to the supply chain.

Nexus has been operating a commercial scale non-mechanical recycling facility in Atlanta, Georgia since 2019, recovering and converting ~30 million pounds annually of films and flexible packaging into recycled feedstocks that replace virgin quality feedstocks in the production of new materials and plastics. Nexus is building another non-mechanical recycling facility in Georgia which will be commissioned throughout 2027-28, expanding our total capacity to recycle films and flexible packaging to ~200 million pounds annually.

In addition, if non-mechanical recycling processes can be evaluated in the Full Needs Assessment and included as plastic end markets at the onset of Washington's EPR program plan, Ecology may also capture synergies and benefits in building infrastructure capacity simultaneously for both mechanical and non-mechanical feedstock collection.

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[3] Circular Action Alliance - California Extended Producer Responsibility (EPR) Program Plan dated October 13, 2026, page 219

[4] Washington Draft Preliminary Needs Assessment, page 69

[5] Circular Action Alliance - California Extended Producer Responsibility (EPR) Program Plan dated October 13, 2026, page 204