

Sustainable Polymer Amendment

Initiative:

The Secretary of Defense, in collaboration with relevant federal and non-federal partners, shall establish an initiative to accelerate the research and development of innovative, sustainable polymer processing and manufacturing to support next generation technologies built on a resilient polymer supply chain.

Relevant stakeholders may include:

- Universities and research institutions working on polymer innovation
- National Aeronautics and Space Administration
- United States Department of Commerce Economic Development Administration
- National Science Foundation
- Chambers of commerce and economic development organizations
- State and local governments
- Department of Energy
- Environmental Protection Agency

The initiative may support:

- New material concepts to support end of life recycling or reuse to advance material circularity
- New material formulation initiatives to derisk the supply chain for critical polymeric components
- New polymer processing to enhance material performance for advanced applications
- New polymer-based materials for solid-state batteries and energy devices
- Recyclable light weight composites for advanced applications (aerospace and space applications)
- Bio-based manufacturing of polymers and raw materials from alternative feedstocks
- Commercializing the recycling of end-of-life tires by scaling up processes to recover and re-use polymers

- Identifying applications at risk to polymer supply chain disruptions and propose strategy to develop alternative methods or sources
- Developing curricula and implement training to develop workforce skilled in polymer manufacturing
- Supporting infrastructure to speed up scalability of polymer-based technologies and strengthening manufacturing pipeline
- Development of predictive analytics, algorithms, and machine learning models designed to anticipate and mitigate disruptions across complex, global polymer supply chains.

Report:

No later than 180 days after the enactment of this Act, the Secretary of Defense shall submit to Congress a report on the initiative's implementation including the partners worked with and progress made towards sustainable and reliable polymer manufacturing.