



March 17, 2025

RE: LD 9887, SP0419, An Act Clarifying Exemptions from the Notification Requirements for Products Containing PFAS

Chair Tepler, Chair Doudera, and Members of the Committee on Environment and Natural Resources:

Thank you for the opportunity to provide testimony in support of LD 987 on behalf of the American Chemistry Council's Performance Fluoropolymer Partnership. The Partnership represents manufacturers, processors, and users of fluoropolymers, which are stable, large-molecule PFAS that possess a unique combination of attributes, such as superior physical durability, heat and chemical resistance, and dielectric properties (to name a few), that allow them to perform under the toughest operating conditions in multiple industries. In a recent report, the U.S. Department of Energy said of fluoropolymers:

*"Throughout various industries, fluoropolymers are often essential to maintaining the effectiveness, safety, and robustness of a wide range of products across many industry sectors. . . . [N]o industrially scaled materials are currently available and viable to fill the role of fluoropolymer plastics if required for multiple performance characteristics."*¹

Fluoropolymers meet criteria^{2,3} used to identify polymers of low concern for potential impacts on humans and the environment.^{4,5} They are insoluble substances and therefore do not present concerns about mobility in the environment, in contrast to certain non-polymeric, water soluble PFAS substances. In addition, fluoropolymers are neither bioavailable nor bioaccumulative, are not long-chain non-polymer PFAS, such as PFOA and PFOS, and do not transform into non-polymer PFAS in the environment.

LD 987 would create an exemption for certain categories of products that rely on fluoropolymers to help sustain reliable and safe use in the face of challenging operating

¹ Jacobs, S., and K. David S. Assessment of Fluoropolymer Production and Use with Analysis of Alternative Replacement Materials. U.S. Department of Energy Savannah River National Laboratory. January 2024. Report SRNL-STI-2023-00587, Revision 0.

² Organisation for Economic Co-operation and Development. 2009. Data analysis of the identification of correlations between polymer characteristics and potential for health or ecotoxicological concern. Document ENV/JM/MONO(2009)1. Paris (FR).

³ BIO by Deloitte. (2014). Technical assistance related to the review of REACH with regard to the registration requirements on polymers – Final report prepared for the European Commission (DG ENV), in collaboration with PIEP.

⁴ Henry, B.J., Carlin, J.P., Hammerschmidt, J.A., Buck, R.C., Buxton, L.W., Fiedler, H., Seed, J. and Hernandez, O. (2018), A critical review of the application of polymer of low concern and regulatory criteria to fluoropolymers. Integr Environ Assess Manag, 14: 316-334, <https://doi.org/10.1002/ieam.4035>.

⁵ Korzeniowski, S.H., Buck, R.C., Newkold, R.M., El kassmi, A., Laganis, E., Matsuoka, Y., Dinelli, B., Beauchet, S., Adamsky, F., Weilandt, K., Soni, V.K., Kapoor, D., Gunasekar, P., Malvasi, M., Brinati, G. and Musio, S. (2022), A critical review of the application of polymer of low concern regulatory criteria to fluoropolymers II: Fluoroplastics and fluoroelastomers. Integr Environ Assess Manag, <https://doi.org/10.1002/ieam.4646>.

conditions in applications that would not be considered potentially significant sources of human or environmental exposures. We support all proposed exemptions in LD 987 and note that the use of fluoropolymers in the types of heavy equipment detailed in the bill are not substantially different from their use in automobiles (e.g., their use in fuel, brake, chassis, electrical, sensor, and other design systems). We take this opportunity to expand on two exemptions in the bill, one for products that are part of Maine's communications infrastructure and the other for products that are part of Maine's energy infrastructure.

1. Proposed exemption: A power source, including a generator set, electric battery, fuel cell or products used for the generation and distribution of electricity.

Energy security and innovation are keys to a healthy, sustainable economy for Maine and our entire country. The durability, efficiency, and safety of our energy generation, storage, and distribution infrastructure is necessary if we are to meet higher energy demands through a diverse array of technologies that bring renewables, high-performance batteries, and low-carbon hydrogen into our energy system. Fluoropolymers and their unique combination of durability and resistance to chemically challenging environments help to increase the lifetime of components, yielding lower maintenance costs, increased efficiency, and reduced failure. Some important energy applications of fluoropolymers include:

Energy Diversification. In addition to their long and ongoing use in combustion-based energy generation, fluoropolymers components and coatings play an important role by adding energy from wind turbines and photovoltaic solar panels to the energy-generation mix. Fluoropolymers are also used in equipment in geothermal plants, flue gas heat exchangers that improve boiler efficiency, and rings, valves, pumps, filters and cables in all forms of energy generation and distribution.

Clean Hydrogen. Fluoropolymer membranes are helping with the adoption of renewable, emission-free hydrogen-based energy. Fluoropolymer membranes are used in the process that splits water molecules (water electrolysis), separating hydrogen from oxygen. Fluoropolymers are also used in fuel cells to convert chemical energy into electricity.

Energy Storage. The growing demand for energy necessitates the adoption of reliable energy storage technologies. Utilities and industrial facilities store energy in flow batteries for distribution during peak demand, which stabilizes the energy flow of existing grids. Fluoropolymers are used in flow batteries because of their strength, conductivity, and ability to stand up to the chemically challenging environment of the battery's interior.

Lithium-ion Batteries. While fluoropolymers are used extensively in vehicles powered by internal combustion engines, they are also used in the manufacture of the lithium-ion batteries that enable the electrification of cars. Specifically, fluoropolymers help to facilitate the transfer of electricity within the battery, leading to higher battery energy density and longer vehicle driving ranges.

2. Proposed exemption: Infrastructure, devices and other equipment used to transmit voice, video and data via broadcasting, cable, satellite, wireless, wireline networks or other means.

Today's world demands dependable, high-performance communications infrastructure to serve and support families, schools, governments, universities, and medical and financial institutions. Fluoropolymers enable the use of thinner and lighter walls in cabling and wire insulation, and their excellent dielectric properties allow for higher data transmission rates for radio signals, phone reception, internet connections, and more. Fluoropolymers provide additional characteristics, including low flammability and smoke generation (critical for data transmitting plenum cables in buildings), high-stress crack resistance, and resistance to chemical stressors and the elements. Some specific examples of fluoropolymer use in telecommunications applications include:

- **Routers, access points, public wireless LAN, and hot spots** that are the backbone of the wireless networks we use every day in our homes, businesses, and institutions;
- **Electronic devices** like laptops, mobile phones, and tablets;
- **Automotive components** like satellite radio, monitors, advance driver assistance systems, and GPS navigation systems;
- **5G telecommunications equipment** like tower antennas and data cables;
- **Ethernet cables** designed to transmit power and data simultaneously for high performance applications supporting gigabit speeds;
- **Connect cables** for motherboards with liquid crystal displays in mobile phones, notebooks, and smart devices;
- **High speed/high frequency printed circuit boards and cable** that supports high performance computing, servers in data centers, and mobile devices, including automotive GPS navigation systems; and
- **Antenna** for wireless communication systems (including mobile phones and other personal electronics, satellite broadcasts, wireless LAN, GPS, and mobile phone base stations).

Thank you again for the opportunity to provide this testimony. Because of the importance of fluoropolymers to the energy and communications infrastructures that are the dual backbones of modern life, and because of their unique combination of properties that provide durability, reliability, long-term performance, and safety, we support the proposed exemptions in LD 987.

Sincerely,

Jay West
Executive Director, Performance Fluoropolymer Partnership