Aya Iizuka

Who is commenting? *(choose the best fit)*
Representative of a product manufacturer(s)

If you are commenting as a representative, what is the name of the entity you are commenting on behalf of?
JEITA, on behalf of the Japanese electric and electronic (E&E) industrial associations:
JEITA (Japan Electronics and Information Technology Industries Association)
CIAJ (Communications and Information Network Association of Japan)
JBMIA (Japan Business Machine and Information System Industries Association)
JEMA (Japan Electrical Manufacturers' Association)
Please also see the details on each association at the end of this paper.

If you represent a product manufacturer or industry group, what industry(ies) do you represent?
Electric and electronic equipment (hereinafter EEE). See attachment for full list (includes table and pictures).

If you represent a product manufacturer, what types of components, products, or product categories do you manufacture that you will be requesting a CUU determination for?
Electric and electronic equipment (hereinafter "EEE") intended for general consumer use. Please also see "Attachment 1:JP4EE_list of GPC brick codes" attached to our comments.
We believe that EEE, including consumer EEE, which are complex durable products, should be excluded from the PFAS prohibition, just as EEE for professional use and means of transportation such as automobiles are. This is because modern daily life can no longer function without high-performance consumer EEE, and much of that performance relies on PFAS. Although EEE includes a very wide range of product categories, the technologies, materials, and components that require the use of PFAS are largely common. For this reason, under the EU's universal-PFAS regulation, derogations are established not by product category but for the technologies, materials, and components that require PFAS.
In case such an approach is not accepted, we would like to submit a list of Electric and Electronic Equipment (EEE) that may use PFAS, based on the Global Product Classification (GPC) brick category code in order to demonstrate how many product groups would fall under the CUU. The GPC classification is based on the intended purpose of products, not on the technologies on which those products depend. As a result, GPC categories for EEE are spread across many different groups.
We believe that, rather than requiring individual companies to submit CUU applications for each product and having the MPCA review them one by one, it would impose far less burden—both on industry and on MPCA—to establish derogations for the applications which require PFAS at the level of the entire EEE sector, or at minimum by the product-category level aligned

with the EU RoHS Directive.

Do you have any recommended changes or other considerations that you think the MPCA should take into account when defining the term "essential for health, safety, or the functioning of society"? *(Please review the proposed definitions in the rule concept document prior to answering)*
See attachment for full comment (includes diagram).

Do you have any recommended changes or other considerations that you think the MPCA should take into account when defining the term "alternative"? *(Please review the proposed definitions in the rule concept document prior to answering)*
See attachment for full comment (includes diagram).

Do you have any recommended changes or other considerations that you think the MPCA should take into account when defining the term "reasonably available"? (*Please review the proposed definitions in the rule concept document prior to answering*)
We consider that the proposed definition should be clarified as follows:
“Reasonably available” means that one or more alternatives to a PFAS can perform comparably to the PFAS being considered for replacement in a product or component and is currently available in sufficient quantity without any contractual or patent barriers. PFAS alternatives that are in use in equivalent products or components which attain all the performance level same as original PFAS using products, such as safety, durability, speed, usabikity, transparency or reliability, are considered “reasonably available.” Conditions of current reasonable availability may change over time as a result of new research or innovation.
Justification:
Technologies that cannot be used due to patent rights, excessively high licensing fees, regional limitations, or similar constraints should not be regarded as “reasonably available.” In addition, for the concept of “functional equivalence,” we propose clarification for the same reasons described above A.6.Q.

When considering the proposed definition of “product category”, how broadly should the agency group product categories? *(Examples: “vehicles” versus “sedans, SUV’s, vans, trucks, RV’s” or "printers" versus "receipt printers, thermal printers, label printers, residential printers, commercial printers, etc.")*
The current definition itself looks appropriate as a definition for chemical products or simple product categories:
“Product category” means a group of similar products that are used for a similar purpose and that could functionally replace each other for that purpose and does not mean variations within a product that do not affect the product’s primary function.
However, as stated in Answer 4 above, we believe that electrical and electronic equipment (EEE), including consumer EEE, which are complex and durable products—should be excluded from the PFAS prohibition, in the same way that EEE for professional use and mobility equipment such as automobiles are excluded.
If such exclusion is not possible, then as described in our Answer 9 below, we request that only the

consumer EEE be allowed to apply for CUU as a whole EEE all at once, or at least by the product-category that is consistent with the EU RoHS Directive.
Justification:
Under the current Minnesota PFAS rules, only consumer EEE—among durable and complex articles— are included within the scope of restrictions of PFAS and subject to CUU requirements. EEE covers so many various product categories, but the technologies and materials and parts needing PFAS used in EEE are basically common. For this reason, the EU's U-PFAS restriction proposal sets derogations based not on individual products but on the technologies, materials, and components requiring PFAS.
Modern daily life can no longer function without high-performance consumer EEE, and much of this high performance relies on PFAS, for which no practical alternatives currently exist. Therefore, establishing cross-sectoral derogations is rational and appropriate.
Based on the current product-category definition proposal, the resulting product categories would likely be similar as those of the Global Product Classification (GPC) brick category codes. As shown in Section 4 above, the number of GPC categories corresponding to EEE is extremely large.
We believe that, rather than requiring individual companies to submit CUU applications for each product and having the MPCA review them one by one, it would impose far less burden—both on industry and on MPCA—to establish derogations for the applications which require PFAS at the level of the entire EEE sector, or at minimum by the product-category level aligned with the EU RoHS Directive.

Should each request for a CUU determination be limited to a single product category, or should applicants be allowed to submit a request for a CUU determination for multiple product categories?

Applications should be allowed either for a single product category or for multiple categories.
However, as stated in our Answers 4 and 8 above, we believe that EEE, including consumer EEE, which are complex and durable products, should be excluded from PFAS restrictions, in the same manner as professional-use EEE and mobility products such as automobiles.
If such exclusion is not possible, then as a second-best option, CUU applications for consumer EEE should be permitted at a cross-sectoral level for the entire EEE industry, or at least by the product-category level aligned with EU RoHS Directive (categories 1 through 7 and category 9 described in Section 3 above).
Justification: Please also see Answer 8 above.
We believe that, rather than requiring each company to submit CUU applications for individual products and having the authority review them case-by-case, it would impose far less burden—both on industry and on MPCA—to establish derogations for the applications which require PFAS at the level of the entire EEE sector, or at minimum by the product-category level aligned with the EU RoHS Directive. For MPCA, consolidating reviews would reduce administrative workload, and for manufacturers (including importers and first distributors within the state), submitting applications covering multiple product categories would reduce application costs.
In case consumer EEE remains within the scope of restrictions, then due to the ubiquitous nature of PFAS, we would like proposals to be based on whole industry sector instead (e.g. electronics sector). For example, if PFAS is used in electronics to provide low refractive index and heat resistance, the purpose of use of the functions may differ per products of each manufacturer. Therefore, if CUU is determined for each product category

such as based on HTS/GPC code, huge number of CUU applications would be necessary despite the same uses, and MPCA would have to verify the approval of CUU for all those applications.
In order to solve this problem, it is desirable to allow CUU determination proposal at a high level that does not rely on the product design. As described in the attached appendixes, PFAS is used in electronics to provide other functions which are essential to the operation of the electronics in addition to low refractive index and heat resistance, and almost all the electronics will be subject to CUU. Therefore, we believe that it is desirable to grant CUU for the electronics field as a whole.

What safety or other standards require the use of PFAS in a product? *(Please include the specific citation)*
See attachment for full comment (includes diagram).

The agency is seeking feedback on the potential that the initial positive CUU determination duration for existing products will expire eight years from the date of issuance regardless of product category. This is intended to stagger renewal deadlines and ease the administrative burden of processing renewals.

- Do you have any concerns about unintended consequences with this proposal?
- Do you have any alternative recommendations to stagger renewal deadlines?

See attachment for full comment (includes diagram).

The MPCA has developed a preliminary list of potentially eligible data categories that may be considered for trade secret requests. *(Please review the rule concept document for the list of potentially eligible data)*

- Do you have any concerns about unintended consequences with this proposal?
- Do you have any alternative recommendations for data that should or should not be eligible for trade secret requests?

See attachment for full comment (includes diagram).

What are the potential ongoing costs to society if the commissioner issues a positive currently unavoidable use determination for the continued use of PFAS within a product or product category? *(For example: environmental, human health, or remediation costs)*
We consider that there would be almost no social cost from setting CUU for EEE, as the emissions relating to electric and electronic equipment (EEE) are quite well managed.
In the first place, at design and manufacturing stages, the use of PFAS in EEE is limited to the places where the functions of PFAS are necessary, because PFAS materials are more expensive in exchange for high-performance than non-PFAS low-performance ones. In addition, in use phase, EEE must keep their quality and performance in their durable life. The PFASs used in products have a very low vapor pressure and therefore do not volatilize at room temperature and are designed to remain where they are applied to provide the required function during the product lifetime, and to perform well under more

severe conditions than the rated operating conditions. We therefore believe that it is unlikely that PFAS in EEE will be emitted during the use phase.
Especially, fluoropolymers generally have very high molecular weights (with number-average molecular weights in the range of several tens of thousands to several hundred thousand daltons). They are thermally, biologically, and chemically stable, exhibit extremely low solubility in water and common solvents, and are therefore assessed as having low environmental mobility and low bioaccumulation potential.
If Minnesota has concerns about the end-of-life stage of the products, it could be effectively managed by the regulations on waste recycling and disposal regulations and on the workplace safety, and their cost-benefit would be much better than uniform regulation of PFAS.

For manufacturers: Administrative cost of requesting a CUU determination (Part 1 of 2). *Please provide your best estimates or rough orders of magnitude (for example "approx. 200 hours"). Precise accounting data is not necessary to answer this question.*

If your company currently possesses information regarding intentionally added PFAS (to the CAS number level) for all components in your product lines, please estimate the number of technical staff hours that were required to establish this baseline.
Other (please specify)
See attachment for full comment.

For manufacturers: Administrative cost of requesting a CUU determination (Part 2 of 2). *Please provide your best estimates or rough orders of magnitude (for example "approx. 200 hours"). Precise accounting data is not necessary to answer this question.*

If your company does not possess information regarding intentionally added PFAS (to the CAS number level) for all components in your product lines, please estimate the number of technical staff hours needed to obtain this data from your Tier 2 or 3 suppliers for a single product line.
Other (please specify)
See attachment for full comment.

For manufacturers: Expenditure considerations when seeking non-PFAS alternatives (Part 1 of 2). *Please provide your best estimates or rough orders of magnitude (for example "primary cost is CapEx"). Precise accounting data is not necessary to answer this question.*

If you have identified a technically viable non-PFAS alternative for one of your products that contains intentionally added PFAS, does implementing this alternative

require Capital Expenditure (such as purchasing new molds, retooling machinery) or primarily Operational Expenditure (such as purchasing more expensive raw materials)?

- Please estimate the ratio of Capital Expenditure to Operational Expenditure (or indicate which category is the dominant cost driver).

At present, no such estimation can be carried out since no alternatives to PFAS exist.
Even in the RoHS case, where four metal elements and two groups of the flame retardants were regulated and some feasible alternatives for actual use in EEE is established, the threshold is from 100ppm to 1,000ppm, and necessary derogations and grace period are set, the average cost per company was $2,640,000 to achieve initial RoHS compliance and another $482,000 for annual maintenance. (According to a study conducted for the U.S. Consumer Electronics Association (currently, CTA) by researcher Technology Forecasters Inc. (TFI).) The study found that the RoHS Directive cost the global electronics industry more than $32 billion for initial compliance and about $3 billion annually to maintain compliance. However, the cost for restriction of PFAS would be far higher because there are so many PFAS to be restricted and the threshold is extremely lower, and the necessary derogations have not been established.

For manufacturers: Expenditure considerations when seeking non-PFAS alternatives (Part 2 of 2).

If you have not identified a technically viable non-PFAS alternative for one of your products that contains intentionally added PFAS, have you conducted a Research & Development (R&D) feasibility study?

- If so, what was the cost of that study?

At present, no such calculation can be performed since no candidate material as alternative of PFAS exists. Before considering the cost of PFAS alternatives, no feasible alternative has been found in the first place.
We have continuously been investigating and reviewing the PFAS applications in EEE, and we consider that most of the applications we found out would need derogations from the restriction. Fluorinated materials are generally several to dozens of times more expensive than non-fluorinated materials, and if fluorinated materials could be replaced by non-fluorinated materials, component and equipment manufacturers would have adopted them. However, we have no choice but to use expensive high-performance materials with PFAS if the products need the indispensable properties that can only be achieved with fluorinated materials.
We believe that socio-economic cost by uniform PFAS ban without appropriate preparation should be dully considered rather than the cost of PFAS alternatives.
For EEE, as we explain in the above, PFAS are required in many applications.

For manufacturers: Research and development safety validation cycles.

What is the typical duration of the R&D and safety validation cycle for a reformulated product in your sector (from concept to market entry)?

Does this cycle align with the 5-year renewal period typically associated with regulatory exemptions?

- If not, please explain the specific technical barriers that would require a longer validation period.

At present, no alternatives to PFAS exist. The timeline shown below represents the schedule that would apply if, in the future, materials or technologies capable of replacing PFAS truly were to be established and then used to substitute PFAS in complex molded products. However, for most of PFAS uses in EEE, we have not yet reached even the starting point for this timeline.
When PFAS alternative which is considered really feasible would be found in the future, it is necessary to evaluate not only the safety of the potential PFAS alternative as chemicals but also fulfilment of the required performance with keeping safety and reliability using the alternative in each final product model.
Even if some alternatives are proposed by chemical manufacturers, there is no guarantee that the same performance as before can be obtained. When the substance concerned may be contained in parts having very important functions in products, product design will have to be carefully reviewed, and it would take a long period. Even though some "similar" parts without the substance become available, many processes would be needed until the reliability and durability of a whole product can be finally guaranteed. Each level of article manufacturers (of parts, of components or units, and of finished products) must have their own technical processes for reviewing and developing substitution, testing its quality and reliability, and acquiring certification on applicable standards such as on safety as necessary.
Following is necessary step for typical EEE when substituting a substance for which viable alternatives are established. If there really exists feasible alternative, following steps take at least around five years based on our experience in the EU RoHS compliance. However, we would like to stress again that there are currently no feasible alternatives for essential uses of PFAS in EEE described in our Attachment 3: Safety standards relating to flame retardancy.
i. Procurement and Assessment of Substitute Parts with Suppliers
This includes following two actions:
- Identification of parts / materials containing PFAS
- Development and evaluation of alternatives at suppliers
EEE is composed of a large number of parts that may exceed tens of thousands of complex items. In addition, there are thousands of primary suppliers who supply parts directly, in complex and multi-layered supply chains with secondary and tertiary suppliers that supply parts for those parts. PFAS is a huge group of substances, and as the identifiers such as CAS RN are not specified for PFAS, the investigation becomes extremely difficult for the EEE

manufacturers. Please also see the Figure “Typical structure of supply chain of complex products such as electric and electronic products” in our Answer 12(1).
After the substance-containing parts / materials are identified, replacement by alternative products must be investigated.
ii. Internal Quality Assessments
Evaluation items differ depending on the category of the final product (i.e. EEE), but they can be roughly divided into the following items:
a. performance evaluation
b. long-term reliability evaluation
For performance evaluation, following actions are necessary: processing / molding test of purchased parts /materials, assembly test, and mechanical / electrical performance evaluation.
For long-term reliability evaluation, it includes an accelerated test under high temperature and high humidity conditions.
iii. Quality and Safety Certification
As an example, final products (EEE) acquiring IEC 62368-1 “Audio/video, information and communication technology equipment - Part 1: Safety requirements” certification needs to be certified for each individual product, but the acquisition period varies depending on the product specifications. It includes following steps:
a. the preparation of application documents to the issuance of type tests and test reports;
b. conducting factory audits of suppliers, if necessary.
In addition, changing the parts may require re-acquisition of other certifications such as EMC or energy conservation, which may take longer time.
iv. Supplier Coordination and Manufacturing Changes
At production plant of final product and parts / material suppliers, parts inventories are usually stocked for a certain period. In addition, lead time for new orders to suppliers after completion of replacement evaluation is necessary for another certain period. These periods cannot be uniformly shown since they vary depending on product type. Based on the supplying amount and timing of these inventories and alternative parts / materials and sales status of the final product, we determine the production plan. At the same time, manufacturing changes will be made to switch to alternative parts/materials. Necessary actions include changing the manufacturing process, designing prototype/verification, preparing prototype for pre-mass production /verification, and confirming mass production / quality.

Please provide any additional information or documentation needed to support your answers to any of the questions posed.
Note - This comment has been uploaded by the MPCA on behalf of the commenter. Commenters located outside of the United States are unable to access the comment portal website due to network security. Accommodations were made to accept these comments in an alternative format and upload them on behalf of the commenters.

Do you have any additional questions or comments regarding the PFAS in products: Currently unavoidable use rule? *(Please note that we may be unable to respond to specific questions regarding rule content in this phase of the rulemaking process)*
See attachment for full comment (includes table).

March 27, 2026

JP4EE Input for Draft Rule Concept Summary for PFAS in products: Currently unavoidable use (CUU) rule

Name of the associations which make this input:

The Japanese electric and electronic (E&E) industrial associations:

JEITA (Japan Electronics and Information Technology Industries Association)

CIAJ (Communications and Information Network Association of Japan)

JBMIA (Japan Business Machine and Information System Industries Association)

JEMA (Japan Electrical Manufacturers' Association)

Contact details of responsible person for this contribution:

Organization: Japan Electronics and Information Technology Industries Association (JEITA)
Name: Aya Iizuka Function: Secretariat
Address: Ote Center Bldg., 1-1-3, Otemachi, Chiyoda-ku, Tokyo 100-0004, Japan
E-Mail: aya.iizuka@jeita.or.jp
Tel.: +81 3 5218 1054

The Japanese electric and electronic (E&E) industrial associations – JEITA, CIAJ, JBMIA and JEMA (JP4EE) – hereby express gratitude to the Minnesota Pollution Control Agency (MPCA) for years of efforts to preserve, improve and prevent diminution of the natural environment of the State. We conduct our businesses in the US and all over the world and are firmly committed to protecting human health and the environment and to complying with chemical substance legislations as defined by the countries and regions where we operate. Also, we support active prevention or minimizing chemical pollution by PFAS. In this spirit, we have carefully and conscientiously examined the Questionnaire (c-pfas-rule3-04) and Draft Rule Concept Summary for PFAS CUU rule (c-pfas-rule3-05), and would like to submit our comments and recommendations.

As we cannot answer the questionnaire directly from Japan due to the nature of the internet system, we would like to submit our answers to the questionnaire by email attachment. We thank the MPCA very much for allowing us to comment in such way. We would highly appreciate the MPCA would carefully consider our input.

JP4EE answers to the Questionnaire on Draft Rule Concept Summary for PFAS in products Currently unavoidable use (CUU) rule

Q.1 Who is commenting? *(choose the best fit)*

- ***Member of the general public***
- ***Representative of an environmental group***
- ***Representative of a product manufacturer(s)***
- ***Representative of another unit of government***
- ***Representative of a public health group***
- ***Academic or research organization***
- ***Other (please specify)***

A.1 Representative of a product manufacturer(s)

Q.2 If you are commenting as a representative, what is the name of the entity you are commenting on behalf of?

A.2 JEITA, on behalf of the Japanese electric and electronic (E&E) industrial associations:

JEITA (Japan Electronics and Information Technology Industries Association)

CIAJ (Communications and Information Network Association of Japan)

JBMIA (Japan Business Machine and Information System Industries Association)

JEMA (Japan Electrical Manufacturers' Association)

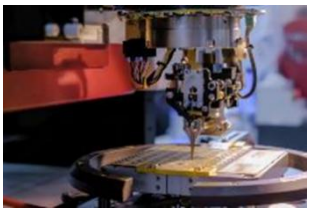
Please also see the details on each association at the end of this paper.

Q.3. If you represent a product manufacturer or industry group, what industry(ies) do you represent?

A.3 Electric and electronic equipment (hereinafter EEE).

EEE for consumer use includes following products (based on the categories under EU RoHS):

1. Large household appliances. For example: Refrigerators; Freezers; Other large appliances used for refrigeration, conservation and storage of food; Washing machines; Clothes dryers; Electric stoves; Other large appliances used for cooking and other processing of food; Electric heating appliances; Electric radiators; Other large appliances for heating rooms, beds, seating furniture; Electric fans; Air conditioner appliances; Other fanning, exhaust ventilation and conditioning equipment	
2. Small household appliances. For example: Vacuum cleaners; Carpet sweepers; Other appliances for cleaning; Appliances used for sewing, knitting, weaving and other processing for textiles; Irons and other appliances for ironing, mangling and other care of clothing;	

Toasters; Fryers; Grinders, coffee machines and equipment for opening or sealing containers or packages; Electric knives; Appliances for hair-cutting, hair drying, tooth brushing, shaving, massage and other body care appliances; Clocks, watches and equipment for the purpose of measuring, indicating or registering time; Scales	
3. IT and telecommunications equipment. For example: Personal computers; Laptop computers; Notebook computers; Notepad computers; Printers; Copying equipment; Pocket and desk calculators; and other products and equipment for the collection, storage, processing, presentation or communication of information by electronic means; User terminals and systems; Facsimile; Telephones; Smartphone; Cellphone; Answering systems; and other products or equipment of transmitting sound, images or other information by telecommunications	
4. Consumer equipment. For example: Radio sets; Television sets; Video cameras; Video recorders; Hi-fi recorders; Audio amplifiers; Musical instruments; And other products or equipment for the purpose of recording or reproducing sound or images, including signals or other technologies for the distribution of sound and image than by telecommunications	
5. Lighting equipment. For example: Luminaires for fluorescent lamps with the exception of luminaires in households; All kinds of lamps; Other lighting or equipment for the purpose of spreading or controlling light	
6. Electrical and electronic tools. For example: Drills; Saws; Sewing machines; Equipment for turning, milling, sanding, grinding, sawing, cutting, shearing, drilling, making holes, punching, folding, bending or similar processing of wood, metal and other materials; Tools for riveting, nailing or screwing or removing rivets, nails, screws or similar uses Tools for welding, soldering or similar use; Equipment for spraying, spreading, dispersing or other treatment of liquid or gaseous substances by other means; Tools for mowing or other gardening activities	
7. Toys, leisure and sports equipment. For example: Electric trains or car racing sets; Hand-held video game consoles; Video games; Computers for biking, diving, running, rowing, etc.; Sports equipment with electric or electronic components.	
9. Monitoring and control instruments excluding industrial monitoring and control instruments. For example: Smoke detector; Heating regulators; Thermostats; Measuring, weighing or adjusting appliances for household	

Q.4 If you represent a product manufacturer, what types of components, products, or product categories do you manufacture that you will be requesting a CUU determination for?

A.4 Electric and electronic equipment (hereinafter "EEE") intended for general consumer use. Please also see "Attachment 1:JP4EE_list of GPC brick codes" attached to our comments.

We believe that EEE, including consumer EEE, which are complex durable products, should be excluded from the PFAS prohibition, just as EEE for professional use and means of transportation such as automobiles are. This is because modern daily life can no longer function without high-performance consumer EEE, and much of that performance relies on PFAS.

Although EEE includes a very wide range of product categories, the technologies, materials, and components that require the use of PFAS are largely common. For this reason, under the EU's universal-PFAS regulation, derogations are established not by product category but for the technologies, materials, and components that require PFAS.

In case such an approach is not accepted, we would like to submit a list of Electric and Electronic Equipment (EEE) that may use PFAS, based on the Global Product Classification (GPC) brick category code in order to demonstrate how many product groups would fall under the CUU. The GPC classification is based on the intended purpose of products, not on the technologies on which those products depend. As a result, GPC categories for EEE are spread across many different groups.

We believe that, rather than requiring individual companies to submit CUU applications for each product and having the MPCA review them one by one, it would impose far less burden—both on industry and on MPCA—to establish derogations for the applications which require PFAS at the level of the entire EEE sector, or at minimum by the product-category level aligned with the EU RoHS Directive.

Q.5 Do you have any recommended changes or other considerations that you think the MPCA should take into account when defining the term "essential for health, safety, or the functioning of society"?

A.5 The definition should be harmonized among the States to facilitate information sharing among authorities and to avoid unnecessary confusion within industry.

Specifically, we believe that the definition in Section 2, Definition (I), of the posting draft proposed by the Maine Department of Environmental Protection (DEP) is appropriate and reasonable:

"Essential for Health, Safety or the Functioning of Society" means products or product components that if unavailable would result in a significant increase in negative healthcare outcomes, an inability to mitigate significant risks to human health or the environment, or significantly interrupt the daily functions on which society relies. Products or product components that are Essential for Health, Safety or the Functioning of Society include those that are required by federal or state laws and regulations.
Essential for the Functioning of Society includes but is not limited to climate mitigation, critical infrastructure, delivery of medicine, lifesaving equipment, public transport, and construction."

Justification:
Given that multiple states regulate largely the same products under PFAS restrictions, harmonizing the content to the maximum extent possible—and aligning criteria used to determine a "currently unavoidable use" (CUU)—will reduce administrative burdens not only for industry but also for state authorities. Ideally, CUUs approved by one state should be automatically approved by Minnesota as well, since the reasons PFAS are needed do not change from state to state.

We would also like to highlight several issues with the proposed draft rule. The current draft limits eligibility to

the four categories listed below.

1. *Provision of food, water, shelter, health, hygiene, or bare necessities for human survival;*
2. *Provision of transportation and utilities such as gas, electricity, data, communications, and sewer services;*
3. *Provision of personal, occupational, or public safety, particularly in extreme conditions of use; and*
4. *Other services not covered under items (1) through (3) that serve the basic needs of human beings.*

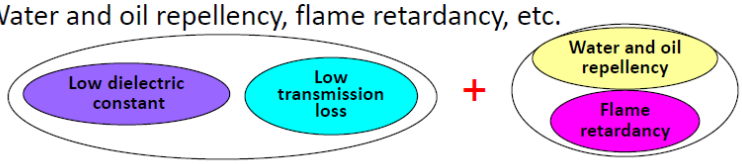
We believe such narrow criteria risk reducing the quality of life for Minnesota residents. For example, in Maine, the product category of "massage chairs" was deemed "non-essential." (That means "massage chairs" would be prohibited in Maine. Regarding electrical and electronic equipment (EEE), not approved as CUU often means the product itself becomes prohibited in Minnesota.) However, in principle, determining whether a product is "necessary" or "unnecessary" should rest with consumers, not environmental agencies. For instance, video game consoles may not fit clearly within any of the four categories below. If Minnesota residents still want game consoles, they will simply purchase them out of state. The entities most harmed by such an outcome would be Minnesota retailers. We show some examples of functions of EEE needing PFAS below.

PFAS Contribute to High-speed Communication/Transmission Functions

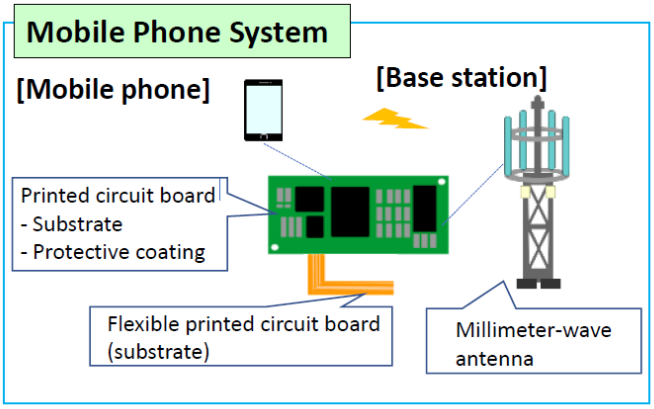
PFAS are the only compounds that provide multi-functionality required by electronic parts for high-frequency applications as shown below:

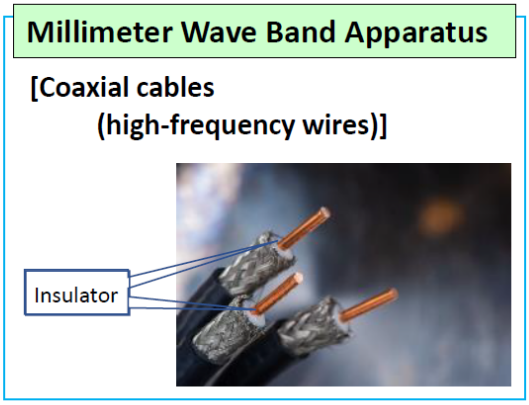
Required functions and properties of EEE : Low dielectric constant at high frequencies and low transmission loss

Required functions for materials : Water and oil repellency, flame retardancy, etc.



Examples of parts which require the use of PFAS:

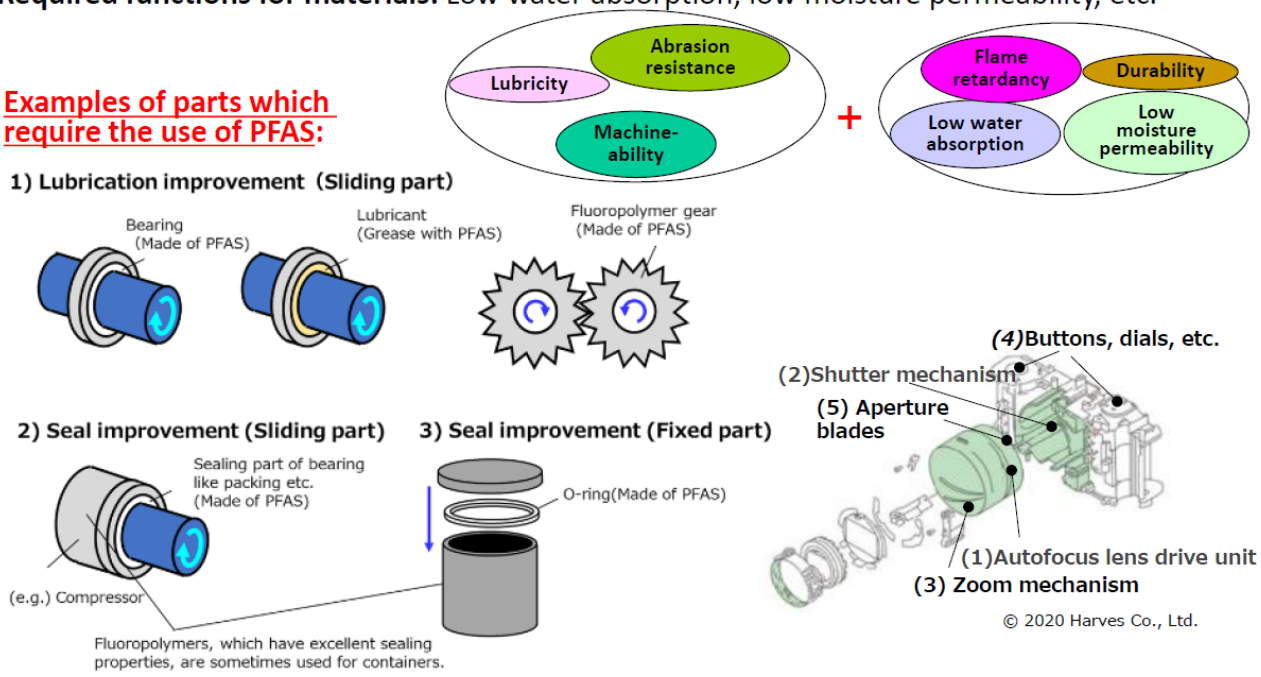




PFAS Contribute to the Sliding Function in Mechanical Sections

PFAS are the only compounds that can simultaneously provide multiple functions necessary for EEE as well as manufacturing equipment of components for such EEE **to properly work under various environments.**

Required functions and properties: Lubricity, abrasion resistance, machineability (elasticity)
Required functions for materials: Low water absorption, low moisture permeability, etc.



For these reasons, we believe the wording of Minnesota's definition should be aligned with that of Maine, and actual determinations for approving CUU should account for socioeconomic impacts. At a minimum, Minnesota should be cautious about excluding entire product categories from the state by refusing to approve CUUs for PFAS in complex consumer EEE, as doing so could degrade the quality of life and services currently enjoyed by Minnesota residents.

■ **Additional issues relating to Q.5 (1) : Socio-economic impact should be duly considered for CUU.**

PFAS is the huge group of the industrial chemicals taking indispensable uses on complex articles such as EEE at present, and we consider that all the EEE is indispensable for the "daily functions" based on current information and communication technologies.

The procedures for judging the above are so-called socio-economic impact assessment. As the guidance for such assessment focusing the possible effects on society which may be caused by regulating a substance, we consider "Guidance on the preparation of socio-economic analysis as part of an application for authorization" for EU REACH Regulation is detailed and still useful as a reference in this field.

The European Chemicals Agency (ECHA): "Guidance on the preparation of socio-economic analysis as part of an application for authorization" (2011)
https://www.echa.europa.eu/documents/10162/2324906/sea_authorisation_en.pdf/aadf96ec-fbfa-4bc7-9740-

a3f6ceb68e6e

■ **Additional issues relating to Q.5 (2) : Specific criteria for determining what uses of PFAS in complex products are considered CUU.**

As for the specific criteria for determining what uses of PFAS are considered CUU, we consider that the conditions set out in the Article 5(1)(a) of EU RoHS DIRECTIVE 2011/65/EU, a global pioneer legislation on the restriction of substances in EEE, should be referred for the PFAS in the complex articles. That is, **PFAS use in a specified application in the complex articles such as EEE should be deemed as CUU, where any of the following conditions is fulfilled:**

- ***their elimination or substitution via design changes or materials and components which do not require any of the PFAS materials or substances is scientifically or technically impracticable,***
- ***the reliability of substitutes is not ensured,***
- ***the total negative environmental, health and consumer safety impacts caused by substitution are likely to outweigh the total environmental, health and consumer safety benefits thereof.***

Decisions on a CUU shall take into account the availability of substitutes and the socioeconomic impact of substitution. If a CUU is not adequately set for an application fulfilling any of the above conditions, the EEE needing PFAS, such as smartphones, printers or TVs, would not be able to be provided to Minnesota anymore, and such situation may give big socio-economic impact not only to the manufacturers but more to the citizens in Minnesota. Nevertheless, although we can propose the criteria, we would like to highlight that it is not possible to determine YES or NO using uniform criteria. Especially for evaluating substances contained in complex articles, necessary evaluation cannot be determined by such simple YES/NO judgement.

Q.6 Do you have any recommended changes or other considerations that you think the MPCA should take into account when defining the term "alternative"?

A.6 We consider that the key word "Functionally equivalent" should be clarified as follows. About the actual practicality of "candidate" alternatives, please also see "Attachment 2: Unfeasibility of other possible substitutes in actual EEE" attached to our comments.

"Alternative" means a non-PFAS chemical, substance, material, manufacturing process change, non-chemical change, or other product that, if used in place of a PFAS or PFAS-containing product, would result in a functionally equivalent product. **When a product using a non-PFAS chemical, substance, material, manufacturing process change, non-chemical change, or other product attains all the performance level same as original PFAS using product, such as safety, durability, speed, usability, transparency or reliability, it shall be deemed as "functionally equivalent".**

Justification:

For durable products such as electrical and electronic equipment, "function" encompasses a wide variety of uses

as described here. Therefore, assessing "functional equivalence" requires that all performance levels—safety, durability, speed, usability, transparency, reliability, and others—be comparable to those of the original PFAS-using product. It would be undesirable, unless the State of Minnesota alone wishes to revert to the early 20th century, to allow conclusions such as replacing mobile phones with PFAS-free landline telephones simply because both provide the "function" of voice calls or replacing LCD televisions with PFAS-free CRT televisions.

In addition, even before addressing such issues, we are concerned that both the Concept Draft and the Questionnaire are written on the premise that substances or materials capable of replacing PFAS already exist. Such assumption is inconsistent with the current scientific and technological reality. It must be recognized that PFAS, particularly fluoropolymers, are extremely difficult to be replaced due to their molecular structure. The carbon-fluorine bond is far stronger than other interatomic bonds found in typical organic materials because of the strong electron-withdrawing ability, low polarizability, and relatively small atomic radius of fluorine. Consequently, **fluoropolymers simultaneously achieve a unique combination of properties in a single material; high thermal stability, chemical inertness to solvents, oils, water, acids, and bases, low dielectric constant and dissipation factors, low water absorption, excellent weatherability, oxidation resistance, and durability.**

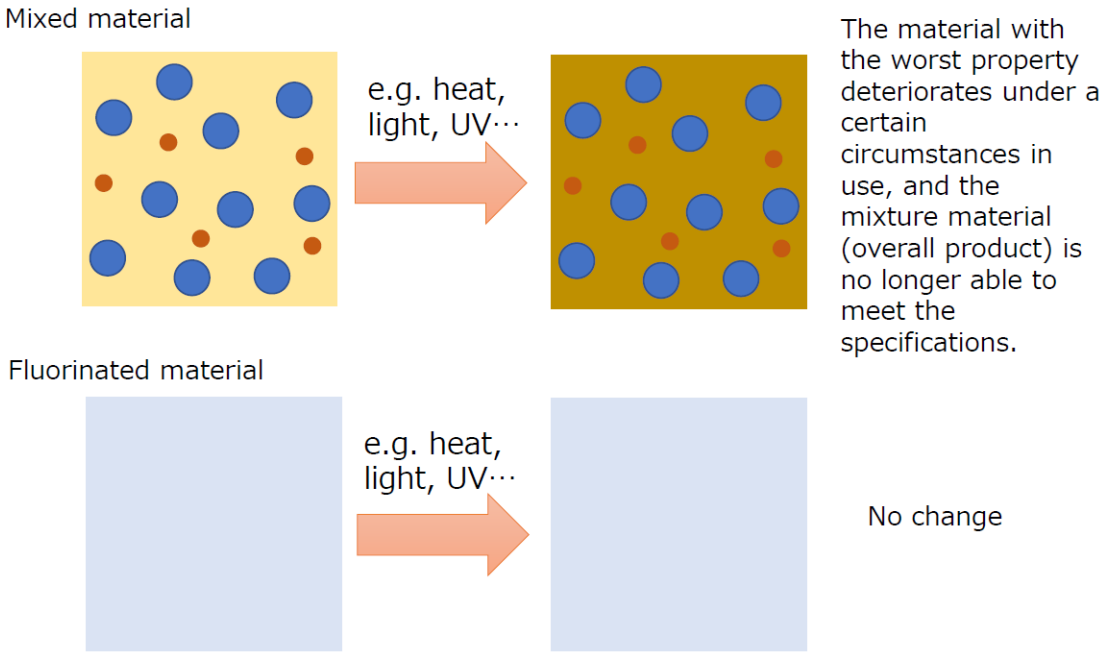
Even if materials exist that match a part of PFAS's property described above, mixing those materials with different properties to collectively reproduce the multifunctionality of PFAS is, as illustrated below, not feasible in practice.

■ **Why is it impossible to replace PFAS with mixing materials?**

The reasons are:

(1) It is difficult to mix the different materials.

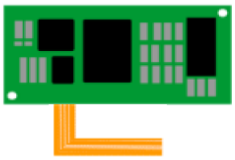
(2) Even if they can be mixed, material with poor properties makes the mixture's property impossible to achieve the desired properties, especially due to deteriorations over time (by the light, UV, chemicals and so on).



For example,

Properties	Defects of mixtures
Heat resistance Light/weather resistance Chemical resistance	The material with poor property in a mixture will decompose first, making the mixture unsatisfied the specification
Low refractive index Low dielectric constant / low dielectric tangent Oil repellency	Mixed materials lower their property
Cleanliness	Mixtures will leach additives. (Fluoropolymers don't need additive.)

Multi-functionality of PFAS
(Not satisfied with a mixture of alternative materials)



e.g. Printed Circuit Board in a Mobile Phone System
The component needs
- Low dielectric constant
- Heat resistance
- Flame retardancy

There may be alternative materials that satisfy each specific property, but...
- Formulating a functional mixture of alternative materials is in most cases, extremely challenging in practice.

Depending on the property, it is the worst-case from the constituent materials that determines the final properties of the mixture.

	Material A (e.g. PPE)	Material B (e.g. PI)	Material C (e.g. Br-based material)	Mixture of Material A/B/C	Fluorinated material
Low dielectric constant	○	△	×	△～×	◎
Heat resistance	△	◎	—	△～×	○
Flame retardancy	×	×	◎	○	◎

◎=Excellent; ○=good; △=not good; ×=bad

For applications where no alternatives to PFAS exist at this point, we believe that it would be more reasonable to establish derogations, as in the proposed U-PFAS restriction of the EU, rather than setting CUUs for each product.

We also attach a separate document summarizing the reasons why all the "alternative candidates" cited by European environmental NGOs for use in EEE are, in fact, not practically usable in real EEE applications. Please see "Attachment 2: Unfeasibility of other possible substitutes in actual EEE" attached to our comments. After 2023, the NGO's list of "possible" substitutes is not updated.

Q.7 Do you have any recommended changes or other considerations that you think the MPCA should take into account when defining the term "reasonably available"?

A.7 We consider that the proposed definition should be clarified as follows:

"Reasonably available" means that one or more alternatives to a PFAS can perform comparably to the PFAS being considered for replacement in a product or component and is currently available in sufficient quantity **without any contractual or patent barriers**. *PFAS alternatives that are in use in equivalent products or components* **which attain all the performance level same as original PFAS using products, such as safety, durability, speed, usabikity, transparency or reliability,** *are considered "reasonably available." Conditions of current reasonable availability may change over time as a result of new research or innovation.*

Justification:

Technologies that cannot be used due to patent rights, excessively high licensing fees, regional limitations, or similar constraints should not be regarded as "reasonably available." In addition, for the concept of "functional equivalence," we propose clarification for the same reasons described above A.6.

Q.8 When considering the proposed definition of "product category", how broadly should the agency group product categories?

A.8 The current definition itself looks appropriate as a definition for chemical products or simple product categories:

> *"Product category" means a group of similar products that are used for a similar purpose and that could functionally replace each other for that purpose and does not mean variations within a product that do not affect the product's primary function.*

However, as stated in Answer 4 above, **we believe that electrical and electronic equipment (EEE), including consumer EEE, which are complex and durable products—should be excluded from the PFAS prohibition, in the same way that EEE for professional use and mobility equipment such as automobiles are excluded.**

If such exclusion is not possible, then as described in our Answer 9 below, we request that only the consumer EEE be allowed to apply for CUU as a whole EEE all at once, or at least by the product-category that is consistent with the EU RoHS Directive.

Justification:

Under the current Minnesota PFAS rules, only consumer EEE—among durable and complex articles— are included within the scope of restrictions of PFAS and subject to CUU requirements. EEE covers so many various product categories, but the technologies and materials and parts needing PFAS used in EEE are basically common. For this reason, the EU's U-PFAS restriction proposal sets derogations based not on individual products but on the technologies, materials, and components requiring PFAS.

Modern daily life can no longer function without high-performance consumer EEE, and much of this high performance relies on PFAS, for which no practical alternatives currently exist. Therefore, establishing cross-sectoral derogations is rational and appropriate.

Based on the current product-category definition proposal, the resulting product categories would likely be similar as those of the Global Product Classification (GPC) brick category codes. As shown in Section 4 above, the number of GPC categories corresponding to EEE is extremely large.

We believe that, rather than requiring individual companies to submit CUU applications for each product and having the MPCA review them one by one, it would impose far less burden—both on industry and on MPCA—to establish derogations for the applications which require PFAS at the level of the entire EEE sector, or at minimum by the product-category level aligned with the EU RoHS Directive.

Q.9 Should each request for a CUU determination be limited to a single product category, or should applicants be allowed to submit a request for multiple product categories?

A.9 Applications should be allowed either for a single product category or for multiple categories.

However, as stated in our Answers 4 and 8 above, we believe that EEE, including consumer EEE, which are complex and durable products, should be excluded from PFAS restrictions, in the same manner as professional-use EEE and mobility products such as automobiles.

If such exclusion is not possible, then as a second-best option, CUU applications for consumer EEE should be permitted at a cross-sectoral level for the entire EEE industry, or at least by the product-category level aligned with EU RoHS Directive (categories 1 through 7 and category 9 described in Section 3 above).

Justification: Please also see Answer 8 above.

We believe that, rather than requiring each company to submit CUU applications for individual products and having the authority review them case-by-case, it would impose far less burden—both on industry and on MPCA—to establish derogations for the applications which require PFAS at the level of the entire EEE sector, or at minimum by the product-category level aligned with the EU RoHS Directive. For MPCA, consolidating reviews would reduce administrative workload, and for manufacturers (including importers and first distributors within the state), submitting applications covering multiple product categories would reduce application costs.

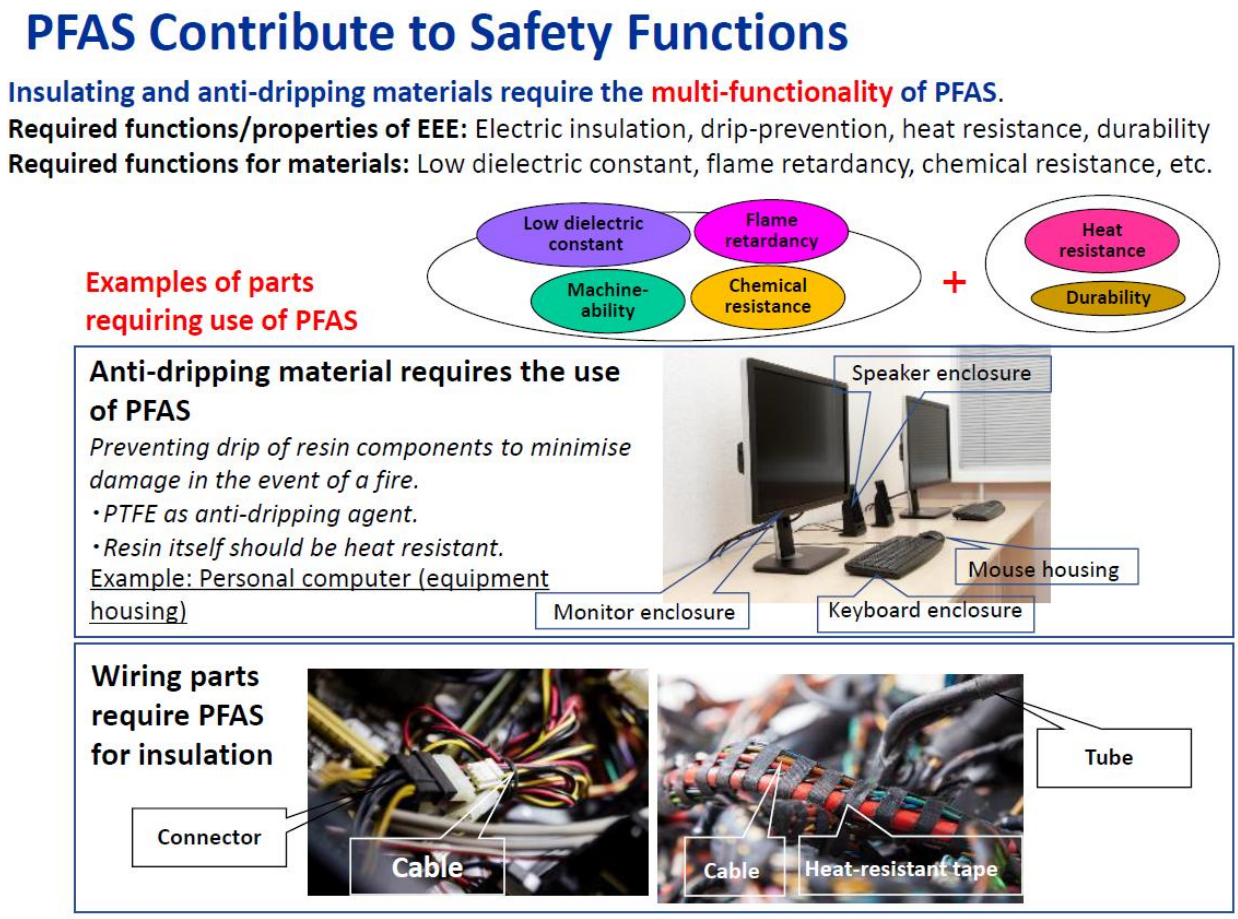
In case consumer EEE remains within the scope of restrictions, then due to the ubiquitous nature of PFAS, we would like proposals to be based on whole industry sector instead (e.g. electronics sector). For example, if PFAS is used in electronics to provide low refractive index and heat resistance, the purpose of use of the functions may differ per products of each manufacturer. Therefore, if CUU is determined for each product category such as based on HTS/GPC code, huge number of CUU applications would be necessary despite the same uses, and MPCA would have to verify the approval of CUU for all those applications.

In order to solve this problem, it is desirable to allow CUU determination proposal at a high level that does not rely on the product design. As described in the attached appendixes, PFAS is used in electronics to provide other functions which are essential to the operation of the electronics in addition to low refractive index and heat resistance, and almost all the electronics will be subject to CUU. Therefore, we believe that it is desirable to grant CUU for the electronics field as a whole.

Q.10 What safety or other standards require the use of PFAS in a product? (Please include the specific citation)

A.10 FThough there are no standards that explicitly require the use of PFAS or any other materials, almost all the standards on high performances of electric products cannot be met without PFAS. Since PFAS provides anti-drip performance, which contributes to flame retardancy, and there are already numerous standards related solely to flame-retardant performance.

For safety standards, please see "Attachment 3: Safety standards relating to flame retardancy" attached to our comments. How PFAS is needed for safety functions, please see the figure below.



Regarding other performance requirements, the functions for which we consider PFAS indispensable in EEE are listed below. All performance standards relating to the following functions ultimately depend on whether PFAS is used.

< Fluoropolymers and Perfluoropolyethers >

1) Sliding elements in mechanical section
2) Optical elements
3) Piezoelectric elements
4) Insulating material requiring flame-retardancy and/or heat-resistant, where the use is needed for safe functioning and safety of equipment
5) Optical elements for LCD panels
6) Electronic circuit boards for high-frequency applications
7) Anti-dripping agent used for safety and to enhance flame retardancy
8) High performance materials for mold release and protection purposes used in the article molding process
9) Batteries
10) Film, sheet or membrane requiring surface performance which ensures multiple functions such as electrical insulation property, chemical resistance, heat resistance, flame resistance, flex resistance and excellent elongation followability at the same time
11) Hermetic sealant requiring low percentage of the compression set as well as simultaneously other functions such as excellent elongation followability, durability, flame resistance, heat and hot water resistance, low water absorption, low moisture permeability, chemical resistance and/or low outgassing.
12) Fluid tubes and containers requiring chemical resistance, high cleanliness
13) PFAS used for semiconductor manufacturing process, semiconductor manufacturing equipment, and semiconductor
14) PFAS used for thin-film device (Micro Electro Mechanical System/MEMS, SAW device, Capacitor, etc) manufacturing process, thin-film device manufacturing equipment, and thin-film device
15) Functional material used in printing process

< Fluoroalkyl compounds with functional groups (such as -OH, -COOH, N-R, etc.) and Side-chain fluorinated polymers >

16) High performance materials for mold release and protection purposes, which ensures multiple functions such as electrical insulation, heat resistance, chemical resistance or flame resistance, etc. at the same time.
17) Semiconductor manufacturing process
18) Thin-film device (Micro Electro Mechanical Systems/MEMS, SAW, Capacitor, etc) manufacturing process
19) Functional material used in printing process

< Fluoroalkanes and fluoroalkenes, and Fluoroethers and fluoro-ketones >

20) Refrigerant used in various appliances such as those for Refrigeration, Air Conditioning and Heat Pump (RACHP) products
21) Refrigerant, coolant, cleaning agent and solvent used for semiconductor process
22) Refrigerant, coolant, cleaning agent and solvent used for thin-film device (Micro Electro Mechanical Systems/MEMS, SAW etc) process
23) Chemicals for ultra-fine processing applications, as typified by semiconductor and MEMS manufacturing

processes

24) Fluids for immersion processes (testing, measuring or adding function) in production processes and laboratories

< Others (PFAS other than ones mentioned above) >

25) Transparent electronic circuit board and circuit

26) Liquid crystal display (LCD) elements

27) Optical elements

28) Functional materials used in printing process

< All the PFAS (fluoropolymers and others) >

29) Functional coatings*

(* "Functional coating" is a coating applied to an article in order to give it the required functions, such as low dielectric properties, low dielectric loss tangent, electrical insulation, heat resistance, UV resistance, chemical resistance, corrosion resistance, weather resistance, water repellency, oil repellency, slipperiness, low refractive index and so on. "Functional coating" includes, but not limited to, "conformal coating" used to protect electronic materials.
In our input, we use the term "functional coating" because the required functions are not only to protect the objects.)

30) Lubricants where the use takes place under harsh conditions or the use is needed for safe and intended functioning and/or safety of equipment.

Q. 11 The agency is seeking feedback on the potential that the initial positive CUU determination duration for existing products will expire eight years from the date of issuance regardless of product category.

(1) Do you have any concerns about unintended consequences with this proposal?

A.11 (1) For complex and durable products such as EEE, eight years would be too short. Fifteen years should be set as "review period".

(a) Currently, we cannot predict the necessary period for substituting PFAS.

The complex article manufacturers consider that the date set for a derogation should not be an expiry date of the derogation but be a date for reviewing it, if MPCA has to dare setting some timeline. We consider 15 years interval would be practical and feasible to review the CUU for example, in considering the broad coverage of PFAS group, the time for the chemical industry to develop the new materials and wide-variety of the final applications in EEE.

Only if practicable PFAS alternatives which can attain necessary performance to EEE would be available at the point of the review, it is for the first time possible to examine the timeline for substitution.

A transition period of at least 4 years would be generally needed for the replacement of the chemicals for which alternatives already exist, even in the case of threshold at 1,000 ppm order. However, since PFAS is very huge

group of substances, we cannot assume the necessary transition period.

Even if some alternatives are proposed by chemical manufacturers, there is no guarantee that the same performance as before can be obtained. When the substance concerned may be contained in parts having very important functions in products, product design will have to be carefully reviewed and it would take a long period. Even though some "similar" parts without the substance become available, many processes would be needed until the reliability and durability of a whole product can be finally guaranteed. Each level of article manufacturers (of parts, of components or units, and of finished products) must have their own technical processes for reviewing and developing substitution, testing its quality and reliability, and acquiring certification on applicable standards such as on safety as necessary.

On the other hand, if there is no available practicable PFAS alternative at the point of the review, the CUUs should be continued to be valid and be reviewed after another 15 years.

(b) About "unintended consequences".

Even eight years from now, if PFAS can no longer be used in EEE, the electrical and electronic equipment available for purchase within Minnesota would simply regress to the technological level of the early 20th century, i.e. the era before PFAS was used. AI and smartphones, for example, would, of course, no longer be usable.

Such an outcome would generate impacts too large to reasonably predict, yet from our perspective this is an "expected consequence" of imposing a complete ban on PFAS in EEE. While manufacturers would merely lose the ability to sell EEE in Minnesota, the residents of the state would likely attempt to procure such products from outside Minnesota, and the entities most severely affected would be the in-state retailers.

Modern high-performance EEE is improving people's lives and health with its fast-processing power and convenience. Products under other sectors than EEE, such as automotive, military, marine, space and aviation also need similar applications of PFAS as EEE because almost all of them use electric parts. PFAS is indispensable to modern technologies in EEE including semiconductors, and if it is totally banned, the world cannot do but returning to the technological level of the first half of the 20th century, making it difficult to maintain modern life.

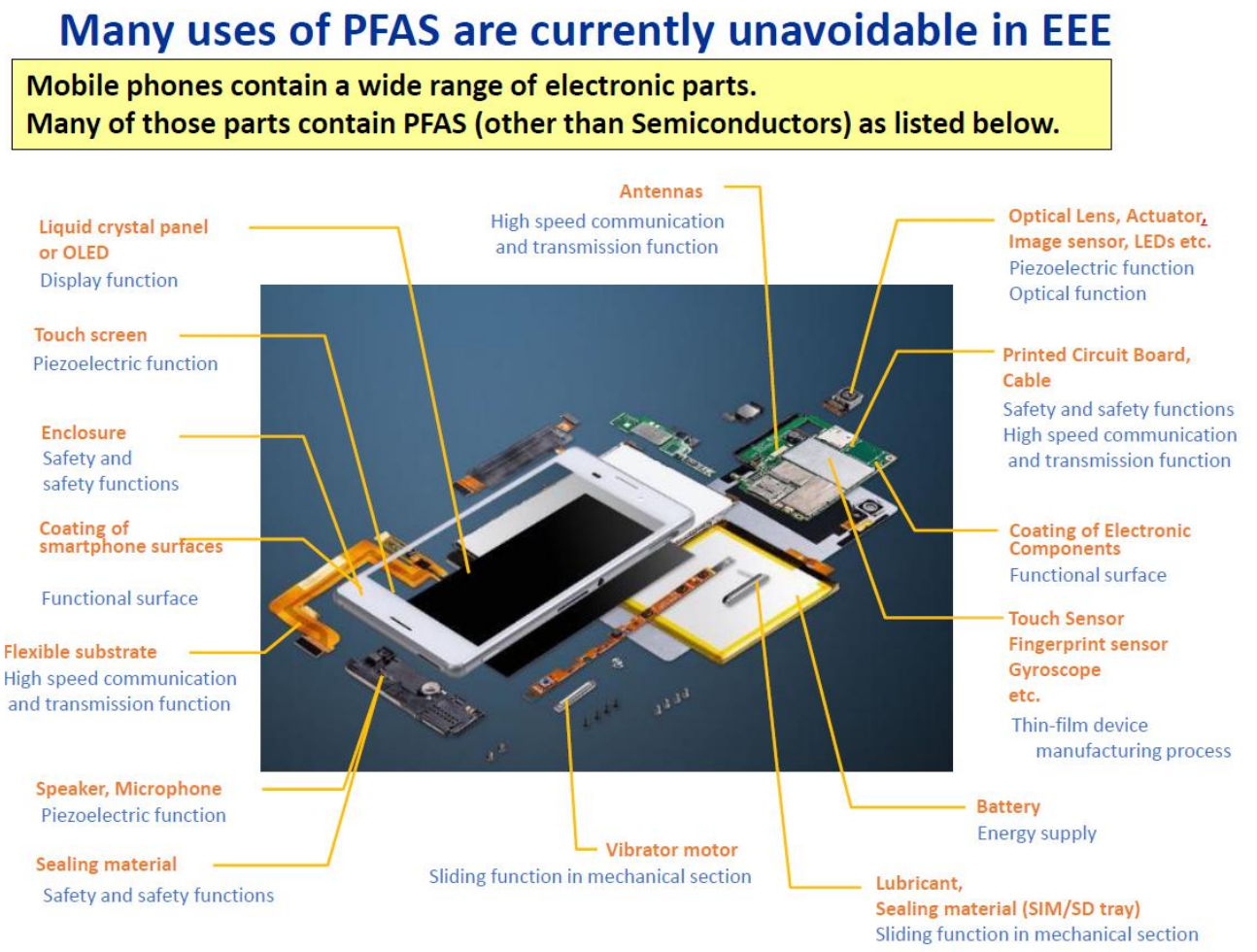
PFAS are the only materials that can simultaneously provide and exhibit multiple functions, such as low dielectric constant, low dielectric loss tangent, low refractive index, oil repellency, electrical insulation, water repellency, heat resistance, chemical resistance, weather resistance, mold releasability, flame resistance, separability, wear resistance, surface properties (friction coefficient), bending strength, stretching properties, non-flammability, etc. which are necessary for electrical and electronic devices.

Multi-functionality of PFAS cannot be satisfied with a mixture of alternative materials. There may be alternative materials that satisfy each specific property, but formulating a functional mixture of alternative materials is, in most cases, extremely challenging in practice, because the worst-property from the constituent materials often determines the final properties of the resulted mixture.

We recognize that these characteristics of PFAS are utilized in many fundamental functions of EEE such as: optical

function; high speed communication and transmission function; piezoelectric function; sliding function in mechanical section; display function (Liquid crystal display / LCD); Safety and safety functions; functional surface; semiconductor; thin-film device manufacturing process; energy supply (battery); cooling function (Refrigerant). However, please note that we cannot obtain the exact identification of substance and its precise contents from the supply chain.

Using a smartphone as an example, here's how many features require PFAS again.



Q.11 (2) Do you have any alternative recommendations to stagger renewal deadlines?

A.11 (2) No. Because, at present, no PFAS uses in EEE are known to be replaceable. (See also Answer 10 as well)

However, if the State of Minnesota were to exempt from its PFAS prohibition the derogations that are proposed under the EU's U-PFAS restriction, separately from the CUU process, then we believe that very few consumer-EEE products would require CUU applications. According to the background documents for the EU's U-PFAS restriction published in August 2025, the following applications are granted derogations for 5 or 12 years from the start of the restriction (we intend to comment in the next consultation that no equivalent alternatives exist for any of these PFAS uses, and that all of them should receive derogations of at least 12 years from the start of the restriction).

The derogations currently proposed in the EU for applications relevant to EEE (excluding those clearly limited to transport or industrial uses) are as follows:

4. e. spare parts intended to replace PFAS-containing articles in articles or complex objects until 20 years after the last date when the complex article was allowed to be placed on the market for the first time or until the end of service life for the specific object, when it is shorter than 20 years

f. spare parts used in articles or complex objects for which legal obligations related to the use of specific spare parts exist until the end of service life of the complex object

i. uses under product and process orientated research and development (PPORD)

j. paper and board articles containing recovered material, with the exception of food-contact material and packaging

k. textile articles containing recovered material, with the exception of toys

l. plastic articles containing recovered material, with the exception of food-contact material and food-contact packaging and toys

5. a. personal protective equipment (PPE) intended to protect users against risks;

b. personal protective equipment (PPE) specifically designed for armed forces, the maintenance of law and order and other emergency response workers;

c. impregnation agents for re-impregnation of articles referred to in paragraph 5b and 5c;

d. hard chrome plating ;

e. refrigerants in low temperature refrigeration below -50 °C ;

f. refrigerants in laboratory test and measurement equipment ;

g. refrigerants in refrigerated centrifuges;

h. refrigerants in HVACR-equipment in buildings where national safety standards and building codes prohibit the use of alternatives;

i. foam blowing agents in thermal insulation foam;

j. propellants for technical aerosols for applications where non-flammability and high technical performance of spray quality are required. The derogation does not apply to products intended for entertainment and decorative purposes for the general public;

k. fluorinated gases used as clean fire suppressing agents where current alternatives damage the assets to be protected or pose a risk to human health ;

l. preservation of cultural paper-based materials ;

m. insulating gases in high-voltage switchgear (above 145 kV) ;

n. refrigerants, clean fire-suppressing agents and insulation gases for maintenance and refilling of existing HVACR, fire-suppressing and switchgear equipment put on the market before the start of the restriction;

s. coatings and films on displays and lenses of electronic complex objects ;

t. printed circuit boards and antennas ;

u. photonics ;

v. heat transfer fluids for 2-phase immersion cooling;

x. coatings and films of electronic components (excluding displays and lenses) ;

y. binders and electrolytes in batteries

z. polymer additives used for fire safety purposes in construction products;

aa. uses of lubricants or lubricant additives (in production process);

bb. gas and oil tracers ;

cc. toners ;

dd. latex printing inks ;

ee. electrophotographic press ;

ff. kinetic printing components ;

gg. photosensitive materials ;

hh. toners for use in existing equipment put on the market ;

ii. latex printing inks for use in existing equipment put on the market ;

kk. propellants in pMDIs ;

nn. sound-permeable and vent filters for electrical and electronic equipment ;

oo. oxygen-permeable membranes in zinc-air batteries and other types of alkaline metal-air batteries ;

tt. impregnation agents for re-impregnation of articles referred to in paragraph 5tt ;

uu. ionic liquids used in industrial uses ;

vv. solvents used in industrial uses ;

6. a. polymer processing aids used in flexible plastic film extrusion (for food and non-food applications) .

b. non-stick coatings in industrial bakeware;

h. wires and cables (incl. connectors)

i. insulation material of electronic components (excluding wires, cables and connectors);

j. anti-drip agent in plastics of electronic components ;

k. fuel cells and electrolysers ;

l. separator coatings for batteries;

m. PTFE nozzles in high voltage (>145 kV) switchgears and circuit breakers

n. front- and backsheets in photovoltaic cells

o. bridge and building bearings ;

p. sealing applications in industrial uses ;

q. machinery applications in industrial uses ;

r. coatings in release liners and backing film in transdermal patches;

s. blisters for solid oral dose formulations ;

t. coated rubber stoppers in vials/flasks for injectable medicinal products ;

u. coated canisters in pressurized metered-dose inhalers (pMDIs) ;

v. coated plungers in pre-filled syringes ;

w. pre-filled injection pens & autoinjectors;

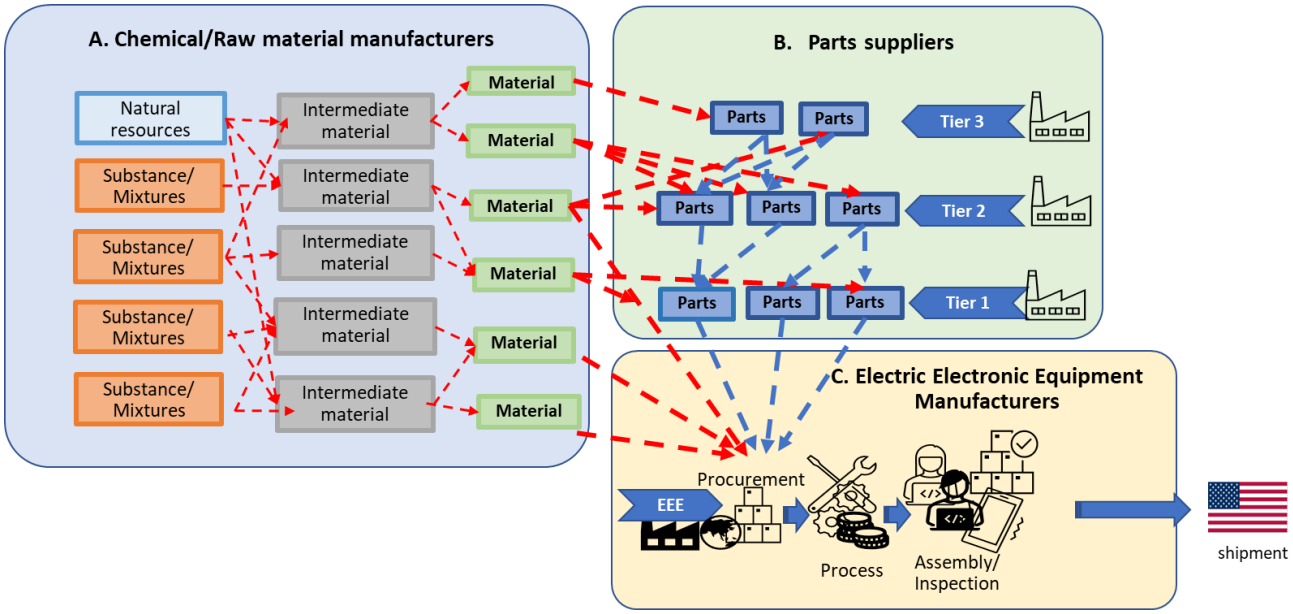
Q.12 (1) The MPCA has developed a preliminary list of potentially eligible data categories that may be considered for trade secret requests.

A.12 (1) For PFAS-containing chemical materials that are manufactured within the United States or imported into the United States as chemical products, an information transfer system similar to the joint submission mechanism under TSCA would allow upstream suppliers to submit information directly to the authority.

However, for the products that have already been processed into articles outside the United States within the global supply chain, chemical manufacturers are not directly subject to the Minnesota PFAS rule or any other U.S. law. As a result, information considered confidential is often not communicated at all to the final product manufacturers located in US.

In most cases, the direct business partners of the final product manufacturers are not chemical manufacturers but component manufacturers. Chemical manufacturers typically exist as the second, third, or even more tier upstream in the supply chain, making it extremely difficult even to identify them by the final product manufacturers.

Typical structure of supply chain of complex products such as electric and electronic products



Much of the information requested for the applications of CUU is often held by suppliers of the materials and components upstream in the supply chain (Group A of the above figure). In most cases, such detailed information is confidential property of the upstream suppliers (Group A) rather than of the manufacturers or importers of products supplied to Minnesota (Group C of the above figure), and it is expected to be too difficult even for the finished-product manufacturers to obtain it. Upstream Group A suppliers which are not directly made a contruct to Group C do not have any legal obligation to give any information, other than those required by applicable law where they are located.

In the first place, the finished products importers or manufacturers by themselves do not require or direct the suppliers to use PFAS. As a result of asking for some functional specifications required for the products, the suppliers simply inform their downstream actors of use of PFAS and that only parts and materials containing PFAS can meet the specifications in response to the inquiry from the finished products importers or manufacturers.

In most cases, detailed information is not provided because PFAS is not restricted in many countries where the suppliers are located. Actors in the supply chain who use PFAS directly are not the direct contractors of the finished products importers or manufacturers but are at far upstream in the supply chain and often difficult even to contact. Information transmission in the EEE supply chain is illustrated as follows.

In the case of EEE including those for consumer use, it is assumed that PFAS is used in many components, but it is not practical for finished-products manufacturers to obtain the information required for CUU applications under the proposed rule for all of them.

For example, identification of the specific per- or poly-fluoroalkyl substance(s) intentionally added to the product or its components should be allowed simplified one. For the cases of EEE, such information must be obtained from the material and component suppliers upstream in the supply chain, who would not provide in most cases any additional information beyond the PFAS, such as the specific chemical name or identifier, to the finished products

manufacturers for reasons of trade secrecy. Recently, supply chain investigations were conducted for the TSCA PFAS report, but specific substance names and CAS numbers were almost impossible to obtain.

Therefore, we consider that information which can be reasonably obtained by the CUU application submitters, that is, the information indicating the use of PFAS with generic name or description, should be accepted in this case, in addition to allowing the treatment as trade secret. More concretely, options similar to those in TSCA§705.18 (a) (2) (ii) should be allowed. Also for any other information that is not owned by the applicant (finished product manufacturer) but by the upstream suppliers in the supply chain who are not directly covered under this law and do not provide it to the downstream, similar treatment as that in this example should be allowed.

Q.12 (2) Do you have any concerns about unintended consequences with this proposal?

A.12 (2) If information required for a CUU application is not owned by the applicant (the final product manufacturer) but instead belongs to upstream suppliers in the supply chain — and those suppliers refuse to provide it — then the applicant would be unable to submit a CUU if the state does not allow applications based on information that is reasonably obtainable.

Since nearly all high-performance EEE contain PFAS, the inability to obtain a CUU would mean that most consumer EEE described in Answer 3 could no longer be used only within Minnesota. The potential impacts of such a situation have already been described above.

Q.12 (3) Do you have any alternative recommendations for data that should or should not be eligible for trade secret requests?

A.12 (3) See our Answer 12(1) above. Most of the information required for a CUU application is not owned by finished product manufacturers. Detailed information regarding PFAS use is often not disclosed downstream at all, and applicants(the final product manufacturer) cannot determine whether data they do not own—and cannot access—should be considered confidential.

Q.13 What are the potential ongoing costs to society if the commissioner issues a positive CUU determination for continued PFAS use?

A.13 We consider that there would be almost no social cost from setting CUU for EEE, as the emissions relating to electric and electronic equipment (EEE) are quite well managed.

In the first place, at design and manufacturing stages, the use of PFAS in EEE is limited to the places where the functions of PFAS are necessary, because PFAS materials are more expensive in exchange for high-performance than non-PFAS low-performance ones. In addition, in use phase, EEE must keep their quality and performance in their durable life. The PFASs used in products have a very low vapor pressure and therefore do not volatilize at

room temperature and are designed to remain where they are applied to provide the required function during the product lifetime, and to perform well under more severe conditions than the rated operating conditions. We therefore believe that it is unlikely that PFAS in EEE will be emitted during the use phase.

Especially, fluoropolymers generally have very high molecular weights (with number-average molecular weights in the range of several tens of thousands to several hundred thousand daltons). They are thermally, biologically, and chemically stable, exhibit extremely low solubility in water and common solvents, and are therefore assessed as having low environmental mobility and low bioaccumulation potential.

If Minnesota has concerns about the end-of-life stage of the products, it could be effectively managed by the regulations on waste recycling and disposal regulations and on the workplace safety, and their cost-benefit would be much better than uniform regulation of PFAS.

Q.14 Administrative cost of requesting a CUU determination (Part 1)
If your company currently possesses information regarding intentionally added PFAS…

A.14 See our Answers 12 and 13 above. Manufacturers of complex molded products cannot obtain all of the information required for a CUU application, even if they request it from their suppliers. Therefore, **unless the application based on information that is reasonably obtainable to the final product manufacturer are allowed, it may become impossible for them to apply for a CUU.**

If applications based on reasonably obtainable information are accepted, it is worth noting that, as a reference, preparing an industry-wide exemption application under the EU RoHS Directive typically requires approximately one year.

Q.15 Administrative cost of requesting a CUU determination (Part 2)
If your company does not possess information…

A.15 **Finished and complex products manufacturers would not be able to obtain detailed information about PFAS from suppliers outside the United States, no matter how much time they spend.** For the reasons, please also see our Answers 12 and 13 above.

Much of the information requested for the applications of CUU is often held by suppliers of the materials and components upstream in the supply chain. In most cases, such detailed information is confidential property of the upstream suppliers rather than of the manufacturers or importers of products supplied to New Mexico, and it is expected to be too difficult even for the finished-product manufacturers to obtain it.

In the first place, the finished products importers or manufacturers by themselves do not require or direct the suppliers to use PFAS. As a result of asking for some functional specifications required for the products, the suppliers simply inform their downstream actors of use of PFAS and that only parts and materials containing

PFAS can meet the specifications in response to the inquiry from the finished products importers or manufacturers. In most cases, detailed information is not provided because PFAS is not restricted in many countries where the suppliers are located. Actors in the supply chain who use PFAS directly are not the direct contractors of the finished products importers or manufacturers but are at far upstream in the supply chain and often difficult even to contact.

Q.16 Expenditure considerations when seeking non-PFAS alternatives (Part 1) Capital vs Operational Expenditure

A.16 At present, no such estimation can be carried out since no alternatives to PFAS exist.

Even in the RoHS case, where four metal elements and two groups of the flame retardants were regulated and some feasible alternatives for actual use in EEE is established, the threshold is from 100ppm to 1,000ppm, and necessary derogations and grace period are set, the average cost per company was $2,640,000 to achieve initial RoHS compliance and another $482,000 for annual maintenance. (According to a study conducted for the U.S. Consumer Electronics Association (currently, CTA) by researcher Technology Forecasters Inc. (TFI).) The study found that the RoHS Directive cost the global electronics industry more than $32 billion for initial compliance and about $3 billion annually to maintain compliance. However, the cost for restriction of PFAS would be far higher because there are so many PFAS to be restricted and the threshold is extremely lower, and the necessary derogations have not been established.

Q.17 Expenditure considerations when seeking non-PFAS alternatives (Part 2) R&D feasibility study cost

A.17 At present, no such calculation can be performed since no candidate material as alternative of PFAS exists. Before considering the cost of PFAS alternatives, no feasible alternative has been found in the first place.

We have continuously been investigating and reviewing the PFAS applications in EEE, and we consider that most of the applications we found out would need derogations from the restriction. Fluorinated materials are generally several to dozens of times more expensive than non-fluorinated materials, and if fluorinated materials could be replaced by non-fluorinated materials, component and equipment manufacturers would have adopted them. However, we have no choice but to use expensive high-performance materials with PFAS if the products need the indispensable properties that can only be achieved with fluorinated materials.

We believe that socio-economic cost by uniform PFAS ban without appropriate preparation should be dully considered rather than the cost of PFAS alternatives.

For EEE, as we explain in the above, PFAS are required in many applications.

Q.18 Research and development safety validation cycles

A.18 At present, no alternatives to PFAS exist. The timeline shown below represents the schedule that would apply if, in the future, materials or technologies capable of replacing PFAS truly were to be established and then used to substitute PFAS in complex molded products. However, for most of PFAS uses in EEE, we have not yet reached even the starting point for this timeline.

When PFAS alternative which is considered really feasible would be found in the future, it is necessary to evaluate not only the safety of the potential PFAS alternative as chemicals but also fulfilment of the required performance with keeping safety and reliability using the alternative in each final product model.

Even if some alternatives are proposed by chemical manufacturers, there is no guarantee that the same performance as before can be obtained. When the substance concerned may be contained in parts having very important functions in products, product design will have to be carefully reviewed, and it would take a long period. Even though some "similar" parts without the substance become available, many processes would be needed until the reliability and durability of a whole product can be finally guaranteed. Each level of article manufacturers (of parts, of components or units, and of finished products) must have their own technical processes for reviewing and developing substitution, testing its quality and reliability, and acquiring certification on applicable standards such as on safety as necessary.

Following is necessary step for typical EEE when substituting a substance for which viable alternatives are established. If there really exists feasible alternative, following steps take at least around five years based on our experience in the EU RoHS compliance. However, we would like to stress again that there are currently no feasible alternatives for essential uses of PFAS in EEE described in our Attachment 3: Safety standards relating to flame retardancy.

i. Procurement and Assessment of Substitute Parts with Suppliers

This includes following two actions:

- Identification of parts / materials containing PFAS
- Development and evaluation of alternatives at suppliers

EEE is composed of a large number of parts that may exceed tens of thousands of complex items. In addition, there are thousands of primary suppliers who supply parts directly, in complex and multi-layered supply chains with secondary and tertiary suppliers that supply parts for those parts. PFAS is a huge group of substances, and as the identifiers such as CAS RN are not specified for PFAS, the investigation becomes extremely difficult for the EEE manufacturers. Please also see the Figure “Typical structure of supply chain of complex products such as electric and electronic products” in our Answer 12(1).

After the substance-containing parts / materials are identified, replacement by alternative products must be investigated.

ii. Internal Quality Assessments

Evaluation items differ depending on the category of the final product (i.e. EEE), but they can be roughly divided into the following items:

a. performance evaluation

b. long-term reliability evaluation

For performance evaluation, following actions are necessary: processing / molding test of purchased parts /materials, assembly test, and mechanical / electrical performance evaluation.

For long-term reliability evaluation, it includes an accelerated test under high temperature and high humidity conditions.

iii. Quality and Safety Certification

As an example, final products (EEE) acquiring IEC 62368-1 "Audio/video, information and communication technology equipment - Part 1: Safety requirements" certification needs to be certified for each individual product, but the acquisition period varies depending on the product specifications. It includes following steps:

a. the preparation of application documents to the issuance of type tests and test reports;

b. conducting factory audits of suppliers, if necessary.

In addition, changing the parts may require re-acquisition of other certifications such as EMC or energy conservation, which may take longer time.

iv. Supplier Coordination and Manufacturing Changes

At production plant of final product and parts / material suppliers, parts inventories are usually stocked for a certain period. In addition, lead time for new orders to suppliers after completion of replacement evaluation is necessary for another certain period. These periods cannot be uniformly shown since they vary depending on product type. Based on the supplying amount and timing of these inventories and alternative parts / materials and sales status of the final product, we determine the production plan. At the same time, manufacturing changes will be made to switch to alternative parts/materials. Necessary actions include changing the manufacturing process, designing prototype/verification, preparing prototype for pre-mass production /verification, and confirming mass production / quality.

Q.19 Please provide any additional information…

A.19. We submit following attachments to this input:

- Attachment 1: JP4EE_list of GPC brick codes (Relating to Answer 4)
- Attachment 2: Unfeasibility of other possible substitutes in actual EEE (Relating to Answer 6 and others)
- Attachment 3: Safety standards relating to flame retardancy (Relating to Answer 10)

Q.20 Do you have any additional questions or comments…

A.20 Following our response to the questions, we would like to submit our additional comments to each item of draft rule concept summary for PFAS in products: Currently unavoidable use (CUU) rule.

No.	Item	Current text	Comments and proposals
1	**Request for a CUU determination content** Applicant information	An applicant can be a single manufacturer, group of manufacturers, or a person representing a manufacturer or group of manufacturers. The request for a CUU determination must include both the manufacturer's information and the applicant's contact information. The name of the manufacturer(s) listed in the request should match the name submitted for the purposes of reporting under Minn. R. part 7026.0030 or updates in part 7026.0040. This guarantees that the agency can link the request to the correct report information and ensures that the information the applicant is required to submit in a request for a CUU determination is not duplicative of the existing reporting requirements. This is also important because the final CUU determination will apply only to the manufacturers listed in the request.	**CUU which is submitted by an individual company or group and granted by the MPCA should be able to be used by all other entities using the granted uses. We would request to clearly stipulate it in this rulemaking.** For complex articles like EEE, if intentionally added PFAS is contained to a part, such PFAS is most likely not added by the manufacturer of the final product but an actor in far upstream supply chain. A PFAS used in a certain use in a certain product category by a manufacturer is most likely used in the same use in other product categories by other manufacturers. Also, the reason not being able to substitute the PFAS in the use is not basically different. It is simply increasing workload for both industries and the MPCA if it needs CUU application each and it needs to examine each application. Therefore, in order for balancing between achievement of policy objectives and effective implementation, it is desirable to apply the use of PFAS granted as CUU to all those who utilize the use in addition to enable CUU application in as high level as possible mentioned above. EU RoHS Directive, de facto standard of the restriction of certain hazardous substances in EEE, also has the exemption clause. Even under EU RoHS, an exemption granted can apply to all entities using the exemption.
2	**Request for a CUU determination content** Applicant information	An applicant can be a single manufacturer, group of manufacturers, or a person representing a manufacturer or group of manufacturers. The request for a CUU determination must include both the manufacturer's information and the applicant's contact information. The name of the manufacturer(s) listed in the request should	**We respectfully propose removing the requirement that the CUU applicant's name match the manufacturer's name submitted in the PFAS reporting requirement and allowing manufacturers other than those listed in the CUU application to also utilize the CUU.** Please note that manufacturers are not necessarily based in the United States. For imported goods manufactured outside the United States, PFAS reporting will be carried out by the local distributor as

No.	Item	Current text	Comments and proposals
		match the name submitted for the purposes of reporting under Minn. R. part 7026.0030 or updates in part 7026.0040. This guarantees that the agency can link the request to the correct report information and ensures that the information the applicant is required to submit in a request for a CUU determination is not duplicative of the existing reporting requirements. This is also important because the final CUU determination will apply only to the manufacturers listed in the request.	manufacturer in accordance with the reporting and fee rule. Meanwhile, CUU applications are to be submitted by the manufacturer, a manufacturer group, or a representative of a manufacturer group, so it is entirely possible that the PFAS reporter and the CUU applicant will be different parties. Please refer to Additional Comment No. 1 for the background on the request to allow parties other than the manufacturer listed in the CUU application to use the CUU. In addition, please refer to Additional Comment No.12 for concerns regarding parallel imports and secondary distribution.
3	Request for a CUU determination content Extreme conditions of use.	“Extreme conditions of use” means an environment that results in one or more of the following: • • • • •	**It should be clearly stated that " Extreme conditions of use " are only one of many factors in an “OR” condition.** Justification: It appears that including "extreme conditions of use" is being considered as a criterion for determining CUU, but it is important to note that in the case of consumer EEE (Emergency Use Exclusive), the product's usage environment itself is not necessarily extreme condition. While "extreme conditions of use" might be a factor in determining whether a garment meets the CUU standard for water-repellent features, this is only one factor among many. In the case of consumer EEE (Enhanced Energy-efficiency) products, the product itself is not necessarily used in "extreme" environments; it is used to achieve high performance. However, because it is a long-life product, even if the environment in which it is used is not extreme condition, high durability after repeated use is necessary. For example, durability tests for hard drives are conducted hundreds of thousands of times, essentially accelerating their lifespan. While the tests themselves are rigorous, the everyday usage environment is not necessarily harsh.
4	Request for a CUU determination content Extreme conditions of use.	“Extreme conditions of use” means an environment that results in one or more of the following: A. High or low operating temperatures, or both; B. High or low material pH, or both;	As mentioned above Additional Comment No.3, " Extreme conditions of use " are only one of the factors in the OR condition for CUU judgment. However, in addition to the A through L conditions currently listed, we believe the following conditions also fall under " Extreme conditions of use" - **Strong chemical stress**

No.	Item	Current text	Comments and proposals
		C. High corrosivity not covered under item B; D. Low reactivity with one or multiple chemicals; E. High or low operating pressures, or both; F. High tear, crack, or other stress potential; G. High or the possibility of high friction or vibration; H. High or sustained humidity or moisture; I. High or concentrated voltage requiring dielectric strength; J. Elevated radiation levels; K. High exposure to oxygen with risk of oxidation or fire; or, L. Others the commissioner may designate.	- **Wear, friction, and sliding stress (Mechanical Wear Conditions)** - **Electrical stress-** - **Chemical/physiological stress for biological and medical applications** We would like to propose the following revisions to the concept draft. <Proposal> "Extreme conditions of use" means an environment that results in one or more of the following: A. High or low operating temperatures, or both; B. High or low material pH, or both; C. High corrosivity not covered under item B; D. Low reactivity with one or multiple chemicals; E. High or low operating pressures, or both; F. High tear, crack, or other stress potential; G. High or the possibility of high friction or vibration; H. High or sustained humidity or moisture; I. High or concentrated voltage requiring dielectric strength; J. Elevated radiation levels; K. High exposure to oxygen with risk of oxidation or fire; or, L. Others the commissioner may designate. **M. Strong chemical stress** **N. Wear, friction, and sliding stress (Mechanical Wear Conditions)** **O. Electrical stress** **P. Chemical/physiological stress for biological and medical applications**
5	Request for a CUU determination content Assessment of alternatives	The applicant must complete and submit an assessment of alternatives in order for the request for a CUU determination to be considered complete. If the applicant does not submit an assessment, or states that there are no alternatives without further explanation, the commissioner will consider the request incomplete and will notify the applicant in writing of this deficiency.	**Please note that, at present, no material-level alternatives to PFAS substances have been found for EEE.** Information on PFAS alternatives in EEE is summarized in "A guide to PFAS in electronics," published in 2023 by the European organization ChemSec. We examined the substitutability of the PFAS alternative candidates listed in that guide and confirmed that the listed "alternative candidates" (so far) cannot achieve the performance required of EEE in today's IT society. For details, please refer to the attached document Attachment 3-Unfeasibility of "possible substitutes" in actual EEE.

No.	Item	Current text	Comments and proposals
6	Request for a CUU determination content Assessment of alternatives	The applicant must complete and submit an assessment of alternatives in order for the request for a CUU determination to be considered complete. If the applicant does not submit an assessment, or states that there are no alternatives without further explanation, the commissioner will consider the request incomplete and will notify the applicant in writing of this deficiency.	**We would like to propose that evaluating alternatives not be mandatory, and that they be included only if the applicant can reasonably obtain them.** Typically, manufacturers of final products present the required specifications to component manufacturers, and component manufacturers develop and produce components that meet those specifications. Except for prohibitions on the use of regulated substances, specifications normally do not designate the substances themselves. In the case of PFAS, evaluations of alternative candidates are conducted in the upstream supply chain (component manufacturers, parts manufacturers, material manufacturers, etc.) rather than by the final product manufacturer, and the evaluation results are usually confidential. Therefore, the final product manufacturer cannot know the details of the alternative candidates or the evaluation results. For difficulties in information transmission within the supply chain, please also refer to our response to the question No.12.
7	**Request for a CUU determination content** Additional information required	The applicant must provide information about any finalized CUU determination made by other jurisdictions in the United States.	CUU recognized in other States should, in principle, also be accepted in Minnesota state. In that case, it is desirable to simplify the application content, and specifically, **we would like MPCA to allow submission of only the fact that it is recognized in XX State.**
8	**CUU determination process** Process Timeline	Process . . . 3. If the request is incomplete, the MPCA will notify the applicant in writing, and the applicant has 30 days to correct any cited deficiencies; Timeline Once the commissioner notifies the applicant of an incomplete request, the applicant has 30 days to submit revisions to correct any deficiencies. If no revisions are submitted within 30 days, the applicant will have to submit a new request.	**We respectfully request that the evaluation items for alternatives, which are part of the application contents proposed in this draft concept, be made optional rather than mandatory.** As mentioned in Additional comment No.6, manufacturers of the final product often cannot obtain sufficient information for the evaluation items of alternatives. If an application for CUU is rejected or judged incomplete solely because sufficient information is not available, many manufacturers of complex molded products will be unable to apply for CUU.

No.	Item	Current text	Comments and proposals
9	**CUU determination process** Process	Process . . . 6. The issuance of a draft determination triggers a 30-day public comment period; 7. The applicant has 30 days after the public comment period to provide a rebuttal to the comments received; and, . . .	**We respectfully request that a condition be added stating that during the 30-day public comment period, objections to CUU applications will be accepted only if they are based on scientific evidence, and that the burden of proof for the validity of submitted comments rests with the commenters.** Under the draft concept, public comments are solicited regarding the CUU application, and the applicant must rebut those comments within 30 days. If a comment is submitted stating that "there are alternative materials for this PFAS application," the manufacturer will have the burden of proof that the alternative material is unsuitable, and depending on the content of the comment, it is considered impossible to evaluate it within 30 days. We would like to avoid a situation where a comment is submitted denying an unsubstantiated CUU application, and the CUU approval is rejected because we were unable to respond within 30 days.
10	CUU determination process Deadline	Deadline . . . In order to address this issue, the MPCA is proposing to establish a deadline for applicants representing “existing products” to submit a request for a CUU determination. The MPCA is seeking feedback on a January 1, 2030 deadline for requests for a CUU determination for existing products. Review of these requests will be prioritized over requests for a CUU determination for “novel products”, which includes products that are not yet sold, offered for sale, or distributed for sale in the state as of January 1, 2030. . . .	**We respectfully request that, if a CUU is approved for a particular brick code, the system be designed to recognize all CUU for the same brick code as CUUs, regardless of when they were sold.** The draft concept sets separate application deadlines for existing and new products, suggesting that a CUU application is required each time a new product goes on sale. Products for which a CUU application has been submitted but have not received CUU approval by the time they are ready for sale cannot be sold in Minnesota. This creates major concern for manufacturers as they cannot predict whether or not they will be able to sell the product. Furthermore, the sheer volume of CUU applications will continue intermittently, increasing the burden on both manufacturers and authorities.

No.	Item	Current text	Comments and proposals
11	**CUU determination process** Renewal	After the initial determination, each renewal of a positive CUU determination will expire five years from the expiration of the positive CUU determination. ・・・	**We respectfully request that the validity period following CUU renewal applications be longer than five years.** We appreciate that MPCA allows more than two renewals, but a five-year validity period is short. For the specific number of years, please refer to the answer to our response to question No.11.
12	**Other** **Minnesota PFAS Reporting Requirements** **Minn. Stat. §116.943** Subdivision 1. Definitions. Subd. 2. Information required.	**Subdivision 1.** **Definitions.** (o) "Manufacturer" means the person that creates or produces a product or whose brand name is affixed to the product. In the case of a product imported into the United States, manufacturer includes the importer or first domestic distributor of the product if the person that manufactured or assembled the product or whose brand name is affixed to the product does not have a presence in the United States. ・・・ **Subd. 2.** **Information required.** (a) On or before January 1, 2026, a manufacturer of a product sold, offered for sale, or distributed in the state that contains intentionally added PFAS must submit to the commissioner information that includes:・・・	**Comments and Questions on Minnesota PFAS Reporting Requirements:** **Manufacturer's responsibilities, particularly for parallel import and distribution** We have several concerns regarding the definition of “manufacturer” and the scope of reporting requirements under the Minnesota PFAS Reporting Requirements (Minn. Stat. §116.943) and the scope of the reporting requirements. Our understanding is that the manufacturer or brand owner of a product is defined as the "manufacturer," and that this includes the importer or first U.S. distributor if the manufacturer or brand owner does not have a presence in the United States. On the other hand, it is not necessarily clear who is responsible for reporting if a product enters Minnesota through third-party distributor or parallel importation, even though the manufacturer or brand owner is not directly involved in sales or distribution to Minnesota. In particular, we believe that it may be beyond the practical controllability of a manufacturer to be responsible for reporting if it includes commercial distribution or secondary or tertiary distribution that the manufacturer does not know or control. We therefore would like to confirm the following. 1. If the manufacturer or brand owner is not directly involved in sales or distribution to Minnesota, can it be construed that a reporting obligation arises because of third-party distribution? 2. In cases involving parallel imports or unknown secondary distribution, which entity is responsible for the reporting obligation?

No.	Item	Current text	Comments and proposals
			3. Where is "first domestic distributor" determined, on a state basis or throughout the United States as a whole? In terms of the effectiveness of the system and legal certainty, we expect a clear interpretation or additional guidance on the scope of responsibility.

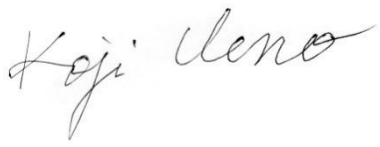
Conclusion:

We believe that EEE, including consumer EEE, which are complex durable products, should be excluded from the PFAS prohibition, just as EEE for professional use and means of transportation such as automobiles are. This is because modern daily life can no longer function without high-performance consumer EEE, and much of that performance relies on PFAS.

We hope our input would provide substantive information to ensure the smooth and practical implementation of PFAS management to realize a healthy environment and a sustainable economy for the present and future generation in the State of Minnesota.

We wish to work together with the MPCA to make the Rule feasible for implementation. Should you have any questions, please do not hesitate to contact the JEITA secretariat.

Sincerely yours,



Koji Ueno
Senior Manager for Green Innovation
Business Strategy Division
Japan Electronics and Information Technology Industries Association (JEITA)
Ote Center Bldg.,1-1-3, Otemachi, Chiyoda-ku, Tokyo 100-0004, Japan
TEL +81-70-3297-8599
koji.ueno@jeita.or.jp

About Japanese electric and electronic (E&E) industrial associations:

About JEITA

The objective of the Japan Electronics and Information Technology Industries Association (JEITA) is to promote the healthy manufacturing, international trade and consumption of electronics products and components in order to contribute to the overall development of the electronics and information technology (IT) industries, and thereby further Japan's economic development and cultural prosperity.
https://www.jeita.or.jp/english/

About CIAJ

Mission of Communications and Information network Association of Japan (CIAJ). With the cooperation of member companies, CIAJ is committed to the healthy development of info-communication network industries through the promotion of info-communication technologies (ICT), and contributes to the realization of more enriched lives in Japan as well as the global community by supporting widespread and advanced uses of information in socio-economic and cultural activities.
https://www.ciaj.or.jp/en/

About JBMIA

Japan Business Machine and Information System Industries Association (JBMIA) is the industry organization which aims to contribute the development of the Japanese economy and the improvement of the office environment through the comprehensive development of the Japanese business machine and information system industries and rationalization thereof.
https://www.jbmia.or.jp/english/index.php

About JEMA

The Japan Electrical Manufacturers' Association (JEMA) The Japan Electrical Manufacturers' Association (JEMA) consists of major Japanese companies in the electrical industry including: power & industrial systems, home appliances and related industries. The products handled by JEMA cover a wide spectrum; from boilers and turbines for power generation to home electrical appliances. Membership of 291 companies,
http://www.jema-net.or.jp/English/