



# **Policy and Perspectives:**

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# **A Global Viewpoint of Flame Retardants**

Thursday, March 31, 2022

# Introductions & Background

# Moderator & Panelists

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## ➤ **Moderator**

- Bob Miller

## ➤ **Asia Pacific**

- Tommy Kinoshita
- Doyoung Kweon
- Raju Thakrar

## ➤ **Europe**

- James Stevens

## ➤ **North America**

- Rob Simon
- Ben Gann



# Agenda



**01**

**EUROPE**

**02**

**ASIA  
PACIFIC**

**03**

**NORTH  
AMERICA**

**04**

**QUESTIONS &  
DISCUSSION**

# Fire Safety, Electronics & Electrical Equipment

- **Increased use of electronics & electrical equipment in homes**
- **Polymers/plastics enhance design & optimize performance**
- **Changing energy sources & output of electronics – and increased use of plastics – increases fire risk**
- **In 2021, US CPSC recalled over 6.2 million units due to fire/shock risk**

# Flame Retardants Key Functionality

## **NO IGNITION – NO FIRE**

- **Broad range of substances with differing characteristics and intended uses**
- **Used ONLY in products presenting fire risk, incl. E&E**
- **Inhibit ignition – essential for safe use of many products and for meeting safety standards**
- **Key in fire prevention – first layer of fire safety**
- **Flame retardants help save lives**

# Key Factors in FR Selection for Use in Products

Physical Properties

Ease of Compounding

Adequate Thermal Stability

Corrosivity Issues

Compatibility

Health and Environmental Toxicity

Appearance

UV Stability

Electrical Properties

Combustion Products

Efficiency/Cost

## Regulatory Landscape & Product Design Considerations

- **Differing regional approaches in regulating flame retardants**
  - Creating additional complexity for product manufacturers
- **Regulators not always using risk-based approaches**
  - Should consider exposure in addition to hazard but in some cases are not
  - Fire safety should also be a consideration for regulators





## Regulatory Landscape & Product Design Considerations

- **Not using a risk-based model can lead to regrettable substitution**
  - This can pose threats and challenges for product design
  - Variety of factors inform use of flame retardants in products
- **Flame retardants need to remain an option for product manufacturers**
- **Increasing need for input from downstream users with regulators**



# Europe

# A View from Europe

James Stevens

Managing Partner, Rud Pedersen Public Affairs





COMMISSION OF THE EUROPEAN COMMUNITIES

Brussels, 27.2.2001  
COM(2001) 88 final

**WHITE PAPER**

**Strategy for a future Chemicals Policy**

*“There is a general lack of knowledge about the properties and the uses of existing substances. The risk assessment **process is slow and resource-intensive** and does not allow the system to work efficiently and effectively.”*



EUROPEAN COMMISSION

Brussels, 14.10.2020

COM(2020) 667 final

**COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT, THE COUNCIL,  
THE EUROPEAN ECONOMIC AND SOCIAL COMMITTEE AND THE COMMITTEE OF THE  
REGIONS**

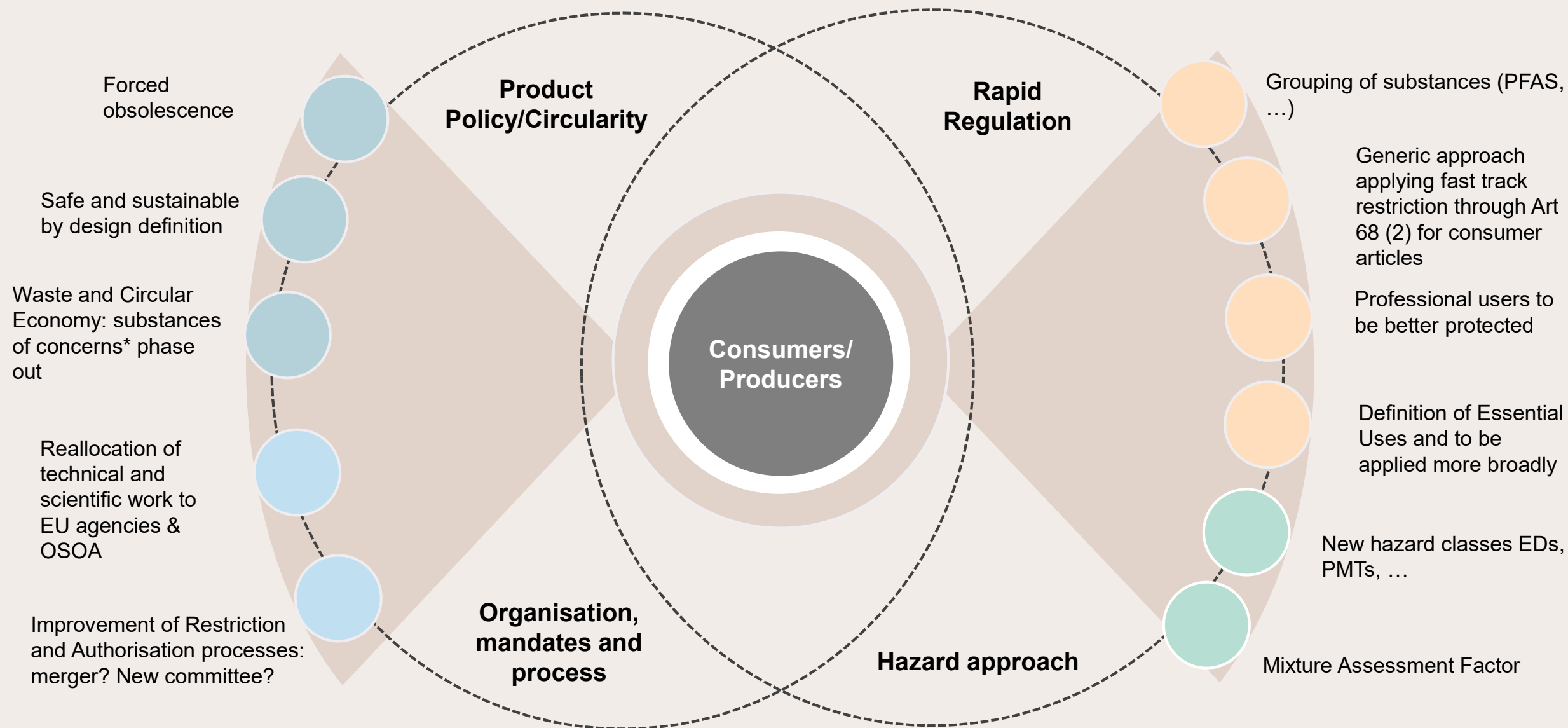
**Chemicals Strategy for Sustainability**

*“**Consumers** are widely exposed to chemicals present in products from toys and **childcare articles** to food contact materials, cosmetics, furniture and textiles to name a few. Millions of workers across the EU come into contact with chemical agents on a daily basis that can be harmful to them.”*

*“In particular, the REACH and CLP Regulations **should be reinforced as the EU’s cornerstones for regulating chemicals** and be complemented by coherent approaches to assess and manage chemicals in existing **sectorial legislation**, especially that regulating consumer products.”*



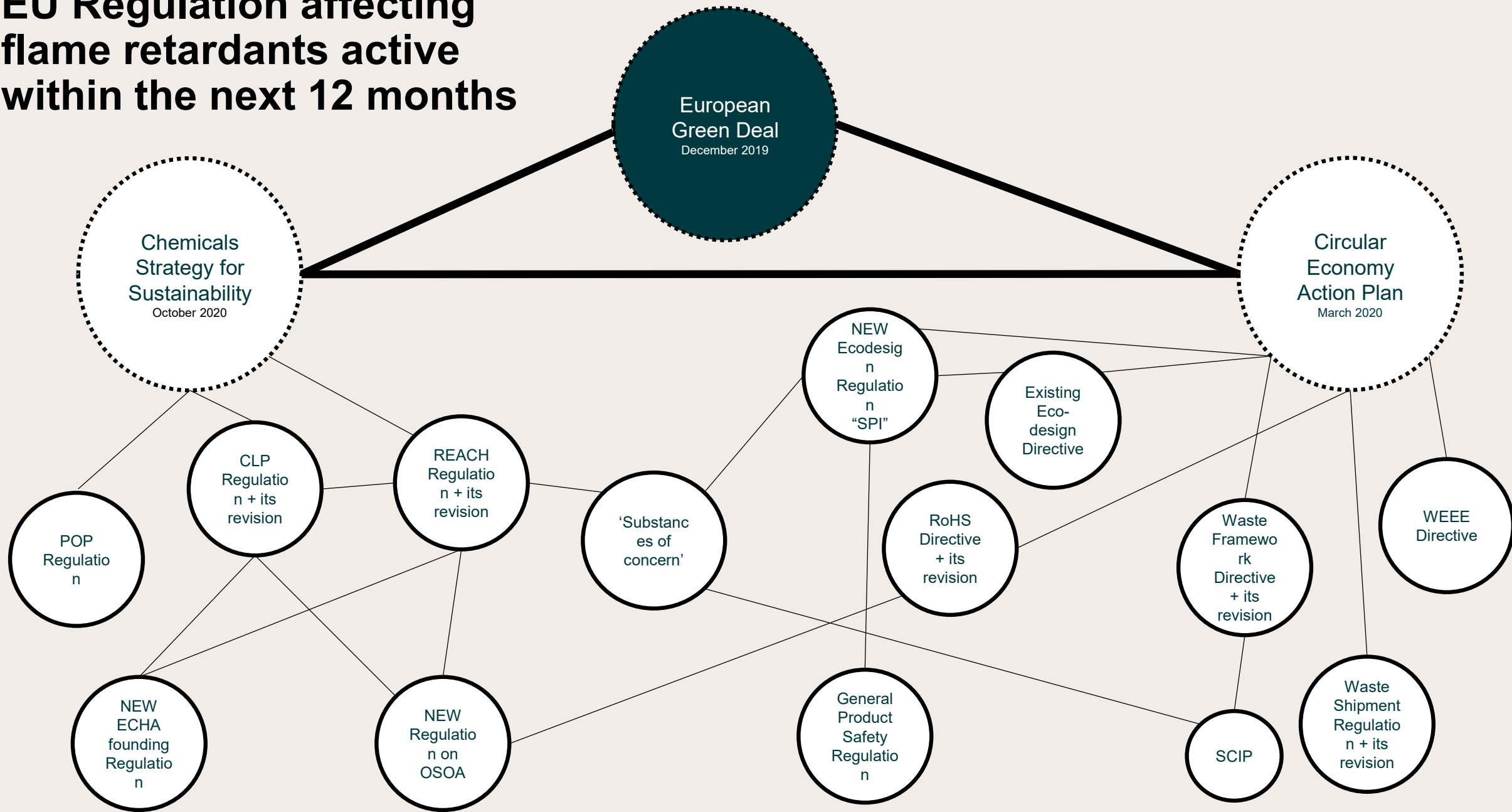
# Key themes of the Chemicals Strategy for Sustainability affecting all chemistries



\* Meets SVHC criteria, CLH: CMR CAT 1 or 2, PBT, PMT, ED, sensitisers CAT 1, organ toxicity, negatively affects the re-use of recycling of materials



# EU Regulation affecting flame retardants active within the next 12 months



# Activities affecting the manufacture and use of BFRs in the EU

## RECENT COURT RULING

**ECJ case failed to successfully challenge blanket ban on HFRs in electronic displays**

- I. Will the Commission take this as a green light to extend to other product groups currently being examined under the Ecodesign Workplan 2020-2024?

## REGULATORY ACTIVITIES

**Candidate listing, harmonised classification, group restriction**

- I. Norway SVHC listing of TBBPA – must be triggering value chain and downstream specifier moves to accelerate substitution.
- II. Pending harmonised classification for TBBPA jointly proposed by Denmark and Norway (Carc. Cat 1B)
- III. All BFRs currently included in Commission Road Map for Restriction – ECHA assessment as to feasibility of developing a group approach is currently underway and will be completed at the end of 2022. Flame retardant strategy expected in summer 2022 by ECHA.

## LEGISLATIVE CHANGES

**Revision of CLP Regulation, REACH Regulation and new Ecodesign Regulation ('SPI')**

- I. Revision of the CLP Regulation to add endocrine disrupting chemicals and other hazard categories.
- II. Revision of the REACH Regulation – extension of generic risk approach to restrict “harmful chemicals” in consumer articles and products by adding new hazard classes (see CLP Regulation).
- III. Revision of the REACH Regulation – incorporation of the essential use concept into an updated REACH restriction process - while flame retardants can probably be seen as essential, BFRs will be challenged across a number of applications where viable alternatives exist.
- IV. Ecodesign Regulation to replace the current Ecodesign Directive – will target SVHC substances, and substances of concern impacting recycling (this was the argument used to ban HFRs in electronic display casings).

# What should be your role in the future?

*As trade-offs will be made during the next 1-2 years, actors of the value chain will play a crucial role.*

- Value chain actors today play a crucial role in supporting regulatory advocacy **but** at this pivotal moment they will **need to support political advocacy**.
- The political audience in the EU is expecting **credible examples** that explain how overarching policy goals are mutually interdependent in the fields of chemicals, circularity and climate policy.
- Anticipate policymakers that focus **on perception of risks and concerns** rather than merely on science.

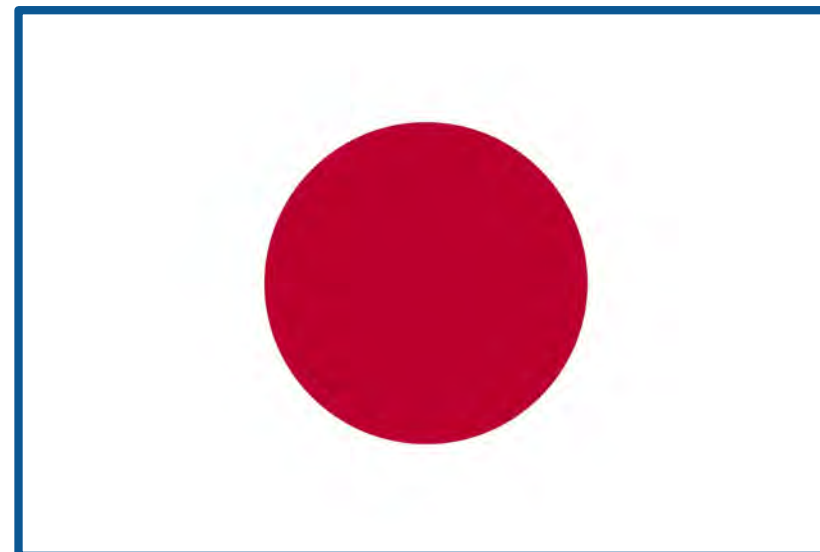




# Asia Pacific

# Japan's Chemical Regulatory Structure

Representative, Tommy Kinoshita  
GR Japan







# Cabinet

Cabinet Office

Executive branch

## Ministries

Public Management,  
Home Affairs,  
Posts and  
Telecommunications

Justice

Foreign Affairs

Finance

Economy,  
Trade and  
Industry

Health,  
Labour  
and Welfare

Agriculture,  
Forestry  
and Fisheries

Land,  
Infrastructure,  
Transport and  
Tourism

Environment

Education,  
Culture,  
Sports,  
Science and  
Technology

**METI's mission:**  
To secure a stable and efficient supply of minerals and energy resources, as well as economic and industrial development centred on the improvement of private economic vitality, and the smooth development of foreign economic relations.



経済産業省

Ministry of Economy, Trade and Industry

## METI's management of chemicals

### **Policies**

Establishment of laws and regulations based on international chemical management surveys

- *Act on the Evaluation of Chemical Substances and Regulation of Their Manufacture, etc.*

- Pollutant Release and Transfer Register [PRTR] system:  
*Act on Confirmation, etc. of Release Amounts of Specific Chemical Substances in the Environment and Promotion of Improvements to The Management Thereof*



Academic papers



regulations

METI's Chemical Substances Council



Regulation-level management



The International  
Bromine Council







### **Ministry's main responsibilities**

Waste control, pollution control, conservation of the natural environment, and protection of the wildlife

- Collects overseas regulatory information on chemical substances (REACH, TSCA, CMP, etc.) and shares them with related organisations

- Law for recycling of plastic materials

- In recent years, the government has gained an international presence in its stance towards environmental issues. Problems (nuclear policy, processing trade-type economy, etc.) exist related to Japan's economic structure

- In 2021, the Cabinet changed within the ruling party, resulting in the appointment of a Minister of Environment who is less proactive than his predecessor

# Overview of OFR Framework in South Korea

Doyoung Kweon, Research Lead  
GR Korea



# Key government stakeholder: Ministry of Environment

The Ministry of Environment (MOE) oversees the execution and development of environmental policies, including on chemical regulations, the circular economy, environmental conservation, and carbon neutrality. MOE is also at the forefront of achieving sustainable economic growth through promoting green policies, including the circular economy and chemical safety.



## Significance

MOE's managing authority over chemical substance registration and K-WEEE framework (K-RoHS) makes it the most important government stakeholder. To prevent unexpected regulations or undesired narratives forming against OFRs, ensuring MOE's perception of OFRs is based on risks and scientific evidence will be important to maintain a stable FR value chain in South Korea.

## Key relevance

**Chemical regulation:** MOE is at the apex of stakeholders on chemical regulation frameworks, such as K-REACH, POPs. It also directs registration and risk assessment of chemical substances.

**Resource circulation:** Remit includes regulation and oversight of ELV and WEEE resource circulation, including the *Act for Resource Recycling of E&E Equipment and Vehicles (K-RoHS)*.



Ministry of Economy and Finance	Ministry of Education	Ministry of Science and ICT	Ministry of Foreign Affairs	Ministry of Unification	Ministry of Justice	Ministry of National Defence	Ministry of Interior and Safety	Ministry of Culture Sports and Tourism
Ministry of Agriculture, Food and Rural Affairs	<b>Ministry of Trade, Industry and Energy</b>	Ministry of Health and Welfare	<b>Ministry of Environment</b>	Ministry of Employment and Labour	Ministry of Gender Equality and Family	<b>Ministry of Land, Infrastructure and Transport</b>	Ministry of Oceans and Fisheries	Ministry of SMEs and Startups



# South Korea OFR policy context

## Policy background

### South Korea's chemical policy direction

- **Substance control**
  - Restrictive regulation on substances → Autonomous safety management
- **Substance registration and evaluation**
  - Stricter evaluation of chemicals, with increased stakeholder involvement

### Regulatory framework on flame retardants

- **Scope of jurisdiction**
  - Less activities on the policy-level, more focused on the executive-level
- **Administrative approach**
  - POPs-focused, rather than human health impact and risks

## South Korea's OFR regulatory trend

### Export-sensitive, yet business-conscious approach

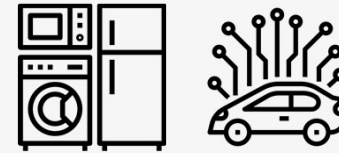
- **South Korea prioritises global standard compliance**
  - Export-reliant economic structure motivates regulatory and corporate entities to enforce regulations aligned with global standards
  - K-REACH, K-RoHS (including EU's WEEE provisions)
- **Government faces difficulty in initiating pre-emptive enforcement**
  - Government faces difficulties in enforcing pre-emptive or excessive regulations putting cost-burden on industries
  - E.g., HBCD is still allowed (limited usage)

### Classification of OFRs

HBCD	Deca-BDE	TBBA	PBDE	PBB
<ul style="list-style-type: none"> <li>• Toxic substance</li> <li>• Intensive control</li> <li>• PBT, CMR</li> </ul>	<ul style="list-style-type: none"> <li>• Intensive control</li> <li>• PBT</li> </ul>	<ul style="list-style-type: none"> <li>• Toxic substance</li> <li>• Intensive control</li> <li>• PBT, CMR</li> </ul>	<ul style="list-style-type: none"> <li>• Restricted substance</li> <li>• PBT, CMR</li> </ul>	<ul style="list-style-type: none"> <li>• Toxic substance</li> <li>• Intensive control</li> <li>• PBT, CMR</li> </ul>

## Recent developments

### E&E resource circulation



**Eco-assurance system:** South Korea's E&E product resource circulation policy aims to promote the use of plastic granulates in product designs, offering recycling incentives to E&E manufacturers

### Industrial fire safety standards

- **Trend of strengthening flammability standards**
  - Amendments to construction laws introduced stronger flammability standards for insulation materials
- **Emphasis on flame retardancy**
  - The demand for flame retardant materials is likely to increase

### Washington State ban

- No direct focus or mention has been made with reference to the Washington State ban on OFRs
- Less media focus on flame retardants is the case for South Korea – continued monitoring will be in the best interest for OFR manufacturers

# North America

# North American Regulatory Update

Rob Simon

Vice President, American Chemistry Council

Ben Gann

Director, American Chemistry Council





## Overview – North America

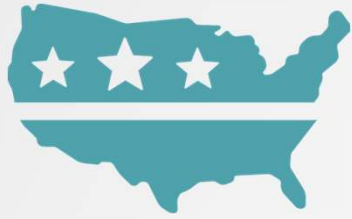
- **Overall strong science and risk-based system for chemical regulation**
- **Generally, no significant restrictions on flame retardants used in electronics and electrical equipment**
  - In fact, broad recognition that E&E products are unique and typically exempted under existing laws
- **However...we are seeing an increase in policy proposals with implications for E&E**
- **A need for more engagement from downstream users to ensure a continuation of science-based policies**

# Canada – Proposed Regulation of DBDPE



- **DBDPE is a FR used in many applications, incl. E&E**
- **No current restrictions on DBDPE globally**
- **Science and government assessments indicate that DBDPE presents no risk to human health or the environment**
  - Even ECSCC's risk assessment concluded that DBDPE is not harmful to human health and does not present an environmental danger
  - However, ECSCC inappropriately used another chemical as a structural analogue to conclude that DBDPE may degrade in the environment in the future
- **Risk assessment is an outlier and any proposed regulations could create disruptions for supply chains**





## United States – Federal Regulation

- **Some FRs are undergoing risk evaluation and in risk management as part of TSCA**
- **Active test orders for TBBPA & TPP include requirements for downstream users**
- **Case study of PIP (3:1) risk management**
- **Actions under TSCA align with United States-Mexico-Canada Agreement and continued regulatory cooperation between the countries**

# United States – State Regulation



- **Proposed regulation in Washington State would restrict the use of OFRs in E&E casings and enclosures**
- **Extremely broad product scope to include but not limited to TVs, laptops, appliances, and power tools**
- **Significant implications for the value chain and availability of materials**
- **Could undermine product safety & lead to regrettable substitution**
- **Could set precedent for how E&E products will be regulated in the future**



# Ways for the Value Chain to Engage

## ➤ **Canada**

- Reach out to ECCC regarding how DBDPE restrictions would affect your company's business operations

## ➤ **TSCA**

- If your company is subject to a test order, ACC has established consortia to help companies meet compliance obligations

## ➤ **Washington State**

- Department of Ecology wants to hear from the value chain and downstream users
- ACC & NAFRA are coordinating on broader industry outreach



# Key Takeaways & Industry Coordination

## Key Takeaways

- **Product safety is a shared objective**
- **Global regulatory landscape is evolving and companies should be aware of the challenges**
- **This shift requires more active input from downstream users**
  - Perspectives of those with product design experience and expertise are particularly valuable

## Industry Coordination

- **Opportunity to work together on proposed policies to ensure the electronics sector's interests are protected**
- **NAFRA will continue to be a resource to assist product manufacturers**
- **Reach out to us if you have questions**
  - NAFRA – [Ben Gann](#)
- **Website resources**
  - [ACC NAFRA Industry Site](#)
  - [Flame Retardants Facts](#)



# Questions & Discussion





**Thank You for  
Attending**

