ABB contribution to the ECHA consultation on PFAS

ABB Electrification Distribution Solutions (ELDS)

ABB ELDS is a part of the ABB group covering the segment of electrical distribution systems in medium voltage (MV) up to 52 kV. ABB ELDS is market leader in power distribution solutions. ABB ELDS serves the EU, as well as the global market, with products produced in both within and outside of the EU. For a wide range of products, the lead development centres and the lead factories are located in Europe. ABB ELDS factories in the EU are located in Germany, Finland, Poland, Czech Republic and Italy with a total of several thousand employees. In addition to direct jobs, we are connected to a wide supplier base in the EU, serving ABB with components and material.

The product portfolio of ABB ELDS covers a wide range of products required for the distribution of electricity. These products are important for the EU electrification by upgrading and extending the electrical networks. Due to the growing distributed energy generation in the medium voltage level by wind and solar power, we expect a significant growth of the segment in the coming years.

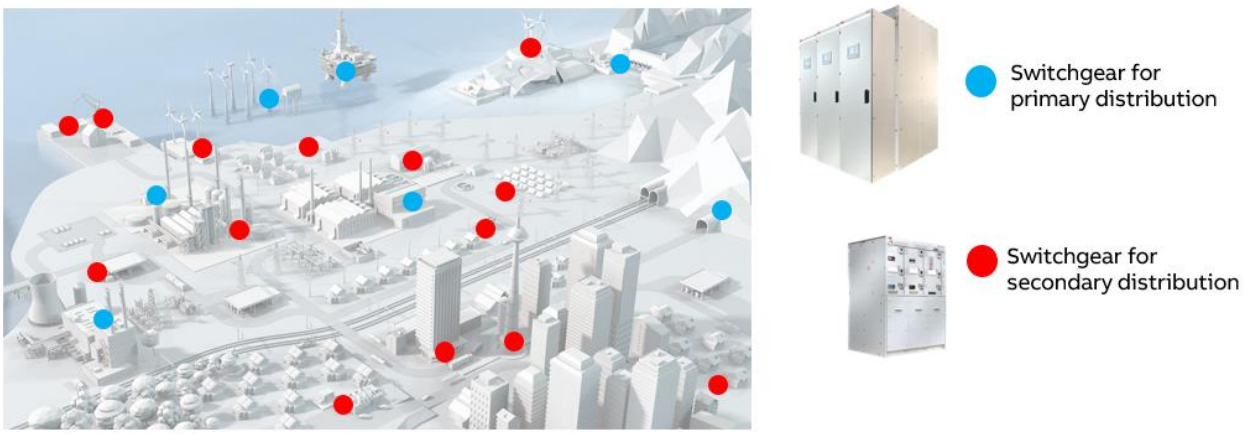

Figure 1: Location of products of ELDS in a typical electrical MV network

Medium voltage switchgear are the top product level in the distribution network. They are either air insulated (AIS) or gas insulated (GIS). Many of the components are designed and manufactured by ABB, such as circuit breakers, cable bushings, instrument transformers and control- and protection relays.
These components are used to build ABB switchgear, but are also manufactured for other companies to be used and sold in their own products. In some markets, outdoor circuit breaker are used in the network without a switchgear. Special applications as railway use e.g. a circuit breaker on the train.

The main requirement for the complete product range is the high quality and reliability level, as the lifetime expectation from the market is extremely high (>40 years) and the maintenance effort for the customer has to be kept low. Failure rates of the products are expected to be extremely low. This requires the use of top quality materials with outstanding performance, reliability for a wide temperature range. All these requirements are supported by PFAS materials or PFAS additives in materials. A part of the complex ABB ELDS product portfolio and how they are linked together is shown in figure 2. The red arrows are pointing to the next level product of ABB, but these components are also sold to 3rd parties for their own products.

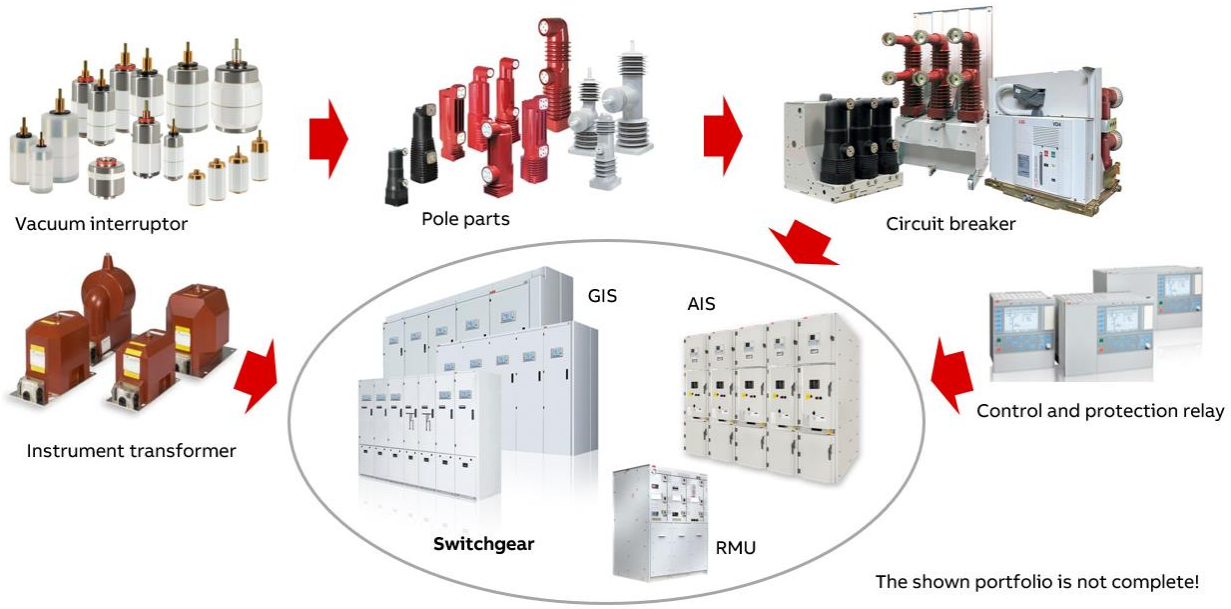

Figure 2: ELDS products and their use in ABB and non-ABB products

Why is ABB contributing to the ECHA consultation on PFAS?

As PFAS are widely used in electrical equipment, ABB ELDS, together with other manufacturers, will be strongly affected by the proposed restrictions, including the very broad ban at very low concentration levels.

ABB is committed to finding an alternative to replace PFAS in a realistic time frame, where it is technically possible, where it is advantageous for the environment and the society. For this we have prepared and uploaded specific contributions on the issue. We ask the ECHA technical experts to review these contributions carefully and consider them in the preparation of the final restriction, taking into account requested exemptions.

In case of additional questions, required background information or direct request for discussion, please feel free to contact us, using the contact details at the end of this document.

ABB Process Control Platform

ABB Process Control Platform, an organization part of ABB's Process Automation Business Area, provides the divisions with future-oriented world-leading process control products and systems. ABB's distributed control system (DCS) is the main offering that the PCP organization provides. The DCS is at the heart of plant-level digitalization and is used for multi-faceted, 24/7 process operations. Distributed Control Systems are found across a wide range of applications including mining extraction, transportation and processing, chemical manufacturing plants, water and wastewater treatment, electric power generation plants, and pharmaceutical processing facilities. The ABB Process Control Platform organization has three core areas: Portfolio & Product Management, R&D and Technology, as well as Operations.

Contribution 3:
Topic: Articles already placed on the Union market for the first time
Target: Exemption from the restriction for additional 5 years

At least until the end of the 18 month transition period, PFAS will be used in many materials and products on the market. Complex articles are a combination of many components (articles) which are manufactured in different locations by different manufacturers (inside and outside EU). In electrical equipment, for example switchgears, this can amount to several thousand components which are supplied or manufactured on the global market. Some components (assemblies, complex articles) contain subassemblies from different manufacturers, which also contain subassemblies from other manufacturers and so on. All of them can contain materials from different suppliers. Every manufacturing site has an incoming stock and often also an outgoing stock for order fulfilment. The manufacturing date of materials or components (articles) could be months or even years before the top-level product is manufactured and delivered to the market (first placing on the market of top-level article). The date of placing on the market of lower-level articles (components of the final product) happens much earlier. This easily consumes the 18 months transition time for top-level products, in case contained articles are included in the prohibition.

Figure 3 shows a simplified overview of the complex supply chain and the involved parties, where everyone has an incoming stock and an outgoing stock. The breakdown in single parts and components is much deeper than displayed here, so there might be several levels below each article.

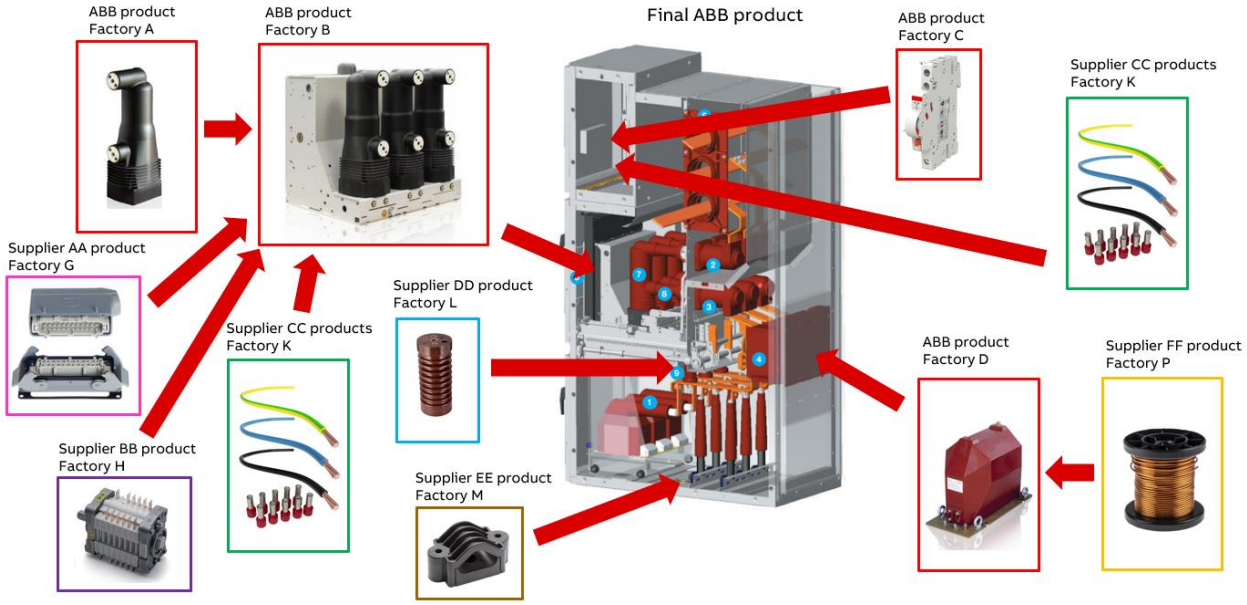

Figure 3: Complexity of supply chain, different supplier, manufacturing places and stocks

Following the actual wording of the restriction, it only points to placing on the market at the hand over to the customer of the top-level product (in this example the switchgear). But this would mean, that this top-level product must be completely PFAS-free including all components right after the end of the transition period. But at this point in time, it would still be produced with material or components in stock. If this is not permitted, the complete stock would need to be scrapped because of already produced articles containing PFAS (which means no environmental benefit compared to using them) and would close down production lines for top-level articles until stocks are filled with PFAS-free products. This could lead to interruptions in the supply of products for months with a significant damage for the industry, the society and the environment. For example, if these products support energy transition projects, they could be significantly delayed.

For this ABB asks for an extended transition time of additional 5 years to complete the transition to PFAS-free solutions on the complete supply chain and to replace already produced PFAS containing articles by PFAS-free articles in ABBs and suppliers stocks.