



Special Report | November 2022

Product passports: The new trend in EU policymaking

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A central part of the EU's circular economy agenda rests on the introduction of so-called 'digital product passports' that will allow tracking the origin of all materials and components used in the manufacturing process of everyday consumer goods.

In this special report, EURACTIV looks at the European Commission's [Ecodesign for sustainable products Regulation](#) and how it will translate in practice for EU consumers and industry.

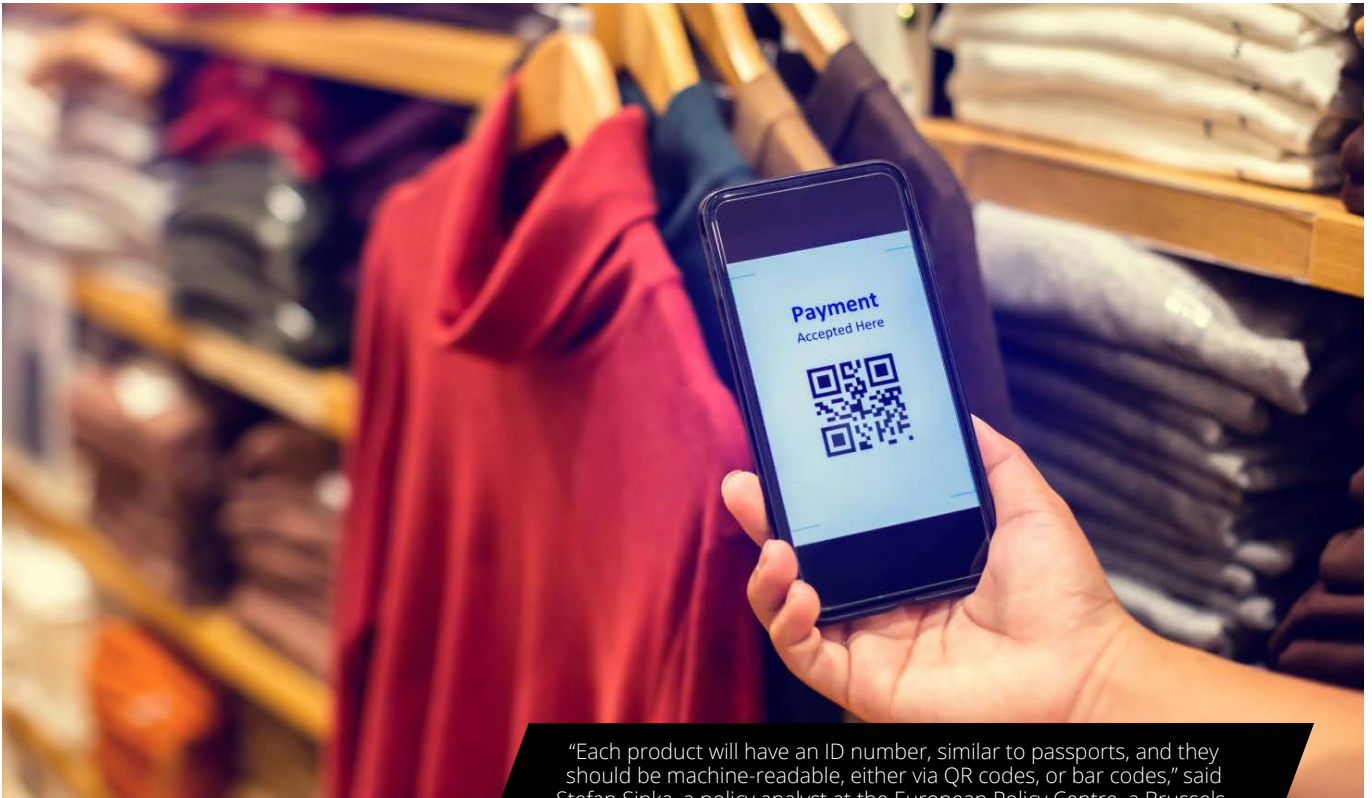
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Digital product passports become the norm in EU's green economy plan

By Anna Gumbau | euractiv.com



"Each product will have an ID number, similar to passports, and they should be machine-readable, either via QR codes, or bar codes," said Stefan Sipka, a policy analyst at the European Policy Centre, a Brussels-based think-tank. [koonisiri boonnak / Shutterstock]

Digital product passports are becoming a central instrument to track the components and origin of raw materials used in all kinds of consumer goods.

The EU is currently reviewing its circular economy rules, with the intention of making green products the norm in the bloc's single market.

A central part of this agenda rests on the introduction of so-called 'digital product passports' that will track the origin of all materials and components used in the manufacturing process of everyday

consumer goods.

The adoption of digital product passports was outlined in the EU's Ecodesign for Sustainable Products Regulation (ESPR), a set of rules adopted on 30 March that aims to make durable and repairable products 'the norm' in the EU's single market.

The ESPR expands the EU's existing ecodesign rules, which currently apply to electric appliances, to a wider range of products, including textiles and furniture.

It will establish rules to make producers responsible for providing more circular products – either by providing products as services or ensuring the availability of spare parts to repair them.

"Digital product passports are tools that can enable more efficient sharing of information across value chains," said Stefan Sipka, a policy analyst at the European Policy Centre (EPC), a Brussels-based think-tank.

"Products would have an ID number, similar to passports, and they should be machine-readable,

either via QR codes, or bar codes," he told EURACTIV.

The passports are also set to include information on the packaging of the product in question, [a European Commission official recently said at a EURACTIV event](#) as Brussels also seeks to update legislation on packaging waste on 30 November.

Opportunities and concerns

Digital product passports can provide good opportunities for businesses, says the EPC's Sipka. These tools can be used "to build closer relations with consumers", he said, as the traceability of all the environmental information of a product should help create trust between the producer and consumers.

EU capitals, businesses and civil society groups alike have been positive about the introduction of digital passports for many products placed on the bloc's single market.

However, many have flagged concerns around who gets to see which kind of information. Data protection and intellectual property issues were the aspects most frequently highlighted by policymakers and industry.

"For people outside industry, it is sometimes not apparent why

such data are sensitive and why all data should not be made publicly available," said Mark Mistry, public policy manager at the Nickel Institute.

For instance, he said the data used in the battery passport may include commercially sensitive information. "Interpreted by the right person they reveal how companies generated a competitive advantage. Disclosing the information would result in a loss of competitiveness," he warned.

Concerns do not only relate to the data being shared, but also who has access to it, said Sipka.

"Consumers are expected to be one of the target groups [of the digital product passports]," he added. "Others could be recyclers, who can see if there are any dangerous chemicals, or repairers, but also law enforcement agencies to check if the products are managed in compliance with EU rules," he remarked.

"For this reason, some data could have different levels of access depending on the target group."

Batteries as pilot

The EU's digital product passport will draw inspiration from the bloc's Battery Regulation, which will oblige all rechargeable industrial and electric vehicle batteries with a storage capacity above 2 kWh to have their own battery passports from 2026.

The exact requirements and information that the battery passports must contain will be established in separate technical implementation rules – called a "delegated act" – due by the end of 2024.

Just like the digital product passports in the ESPR, the battery passports will give a unique identification number to each product and will provide information on the durability and performance of the battery. This information should be accessible through a QR code.

"Battery passports will make sure we facilitate the recycling of batteries, trace the product across the supply chain until it reaches its end of life, and ensure that the ownership and responsibility is clear," said Alex Keynes, manager for clean vehicles at NGO Transport & Environment.

According to the EPC's Sipka, the foundations were laid down in 2017 [when the Commission launched the European Battery Alliance](#) to coordinate industrial efforts around battery manufacturing.

"The European Battery Alliance paved the way for this proposal, bringing policy-makers and the industry to work together on its development," Sipka said.

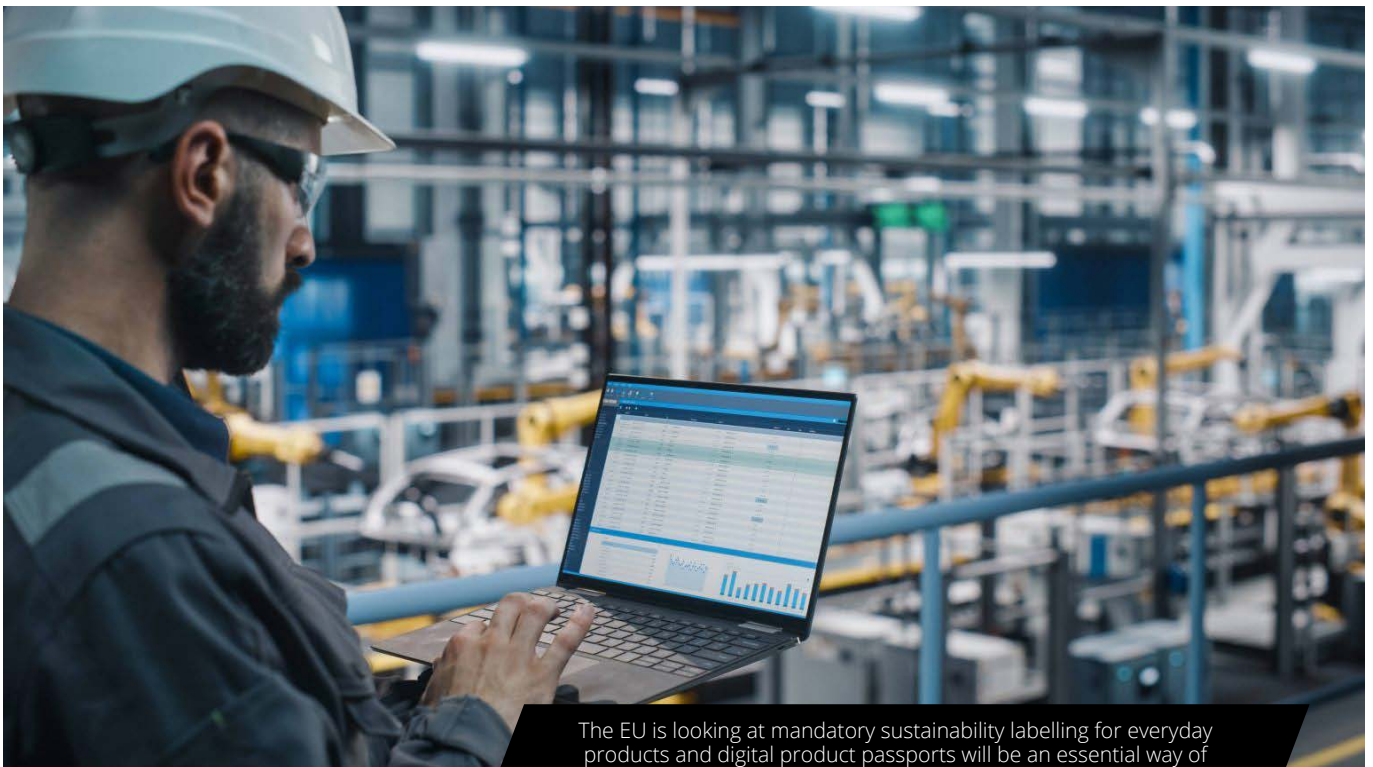


INTERVIEW

Tech start-up: Blockchain is ideal tool for circular economy



By Anna Gumbau | euractiv.com



The EU is looking at mandatory sustainability labelling for everyday products and digital product passports will be an essential way of achieving that, says Phil Brown. [Gorodenkoff / Shutterstock]

Digital product passports will be critical to trace the origin of products and recover raw materials, and could bring several new opportunities for businesses, according to Phil Brown from Circularise.

Phil Brown is Vice-President for Business Development Strategy at Circularise, a Dutch circular economy start-up that has developed prototypes of digital product passports using blockchain technology to trace industrial supply.

Why are digital product passports so important in reaching the EU's climate goals?

If you want to reach a functioning circular economy, the idea is that materials and products flow, they go through their product lifetime extension, they come back, they are recovered.

What that requires fundamentally, is every actor in the value chain to be able to communicate to each other. If all supply chain actors would share information openly and publicly,

we wouldn't need digital product passports.

If the EU actively wants to meet its own emissions reduction targets, then you need a data system that can share that information and a digital product passport is a way of doing that. We are doing digital passports on blockchain because we feel that's the easiest way for it to then be validated and set up.

But the simple thing is, if we're looking at recovery of materials, if we're looking at really understanding

the impact of those materials, there's not really many other ways that you can do that without the concept of a digital product passport. That is critical to a circular economy: the potential, the opportunity is huge, but it requires a big change of mindset.

I am not seeing that many organisations yet really focusing on the benefits of a digital product passport. They're only looking at the bare minimum of what they must do to comply with legislation.

Does this mean that digital product passports would also help Europe address its dependency on raw materials?

If we think geopolitically, Europe doesn't have that many resources. If we see the critical raw materials that go into wind turbines, photovoltaic, batteries, Europe doesn't have those materials, but we buy a lot of those products.

Let's say I'm buying a mobile phone, not produced here. It comes into Europe, and it has a digital passport. What that allows us to do end of life is – with the information held within the passport – to recover that within Europe.

Therefore, if we create the rules and say you need to share that information with us if you want to sell products here, then we see products are already here. The materials of today can be the future materials of tomorrow. So from a long-term, geopolitical point of view, what does that allow the EU to do? That allows the EU to start flipping that material problem because we have lots of materials here. They're just in waste products.

And what are the benefits that digital product passports can bring for companies?

If you start by looking at the product, and you are a manufacturer or brand, you would have more granularity of what's in your product. For instance, what's the percentage of recycled content? What is the percentage of flame retardants, what is the percentage of materials that they can reuse?

The EU is looking at mandatory sustainability labelling, and this means that going forward, I must be able to provide information about product A versus product B in a standardised way. If I don't have that data, I can't do that.

Now, let's say I want to have a year-on-year reduction on the impact of that product from a material selection point of view. So how do I assess that right now? If I have a digital product passport in action from 2022 and then fast forward a year, I can assess batches from 2023, 2024, and so on. If there is a change or an improvement at any point in the supply chain, that can then be represented in the digital product passport. And the idea of a digital product passport on a blockchain system means that you can also have all of that data structured and you can actually ask an external auditor to validate all of that.

So this is also about holding businesses accountable for their claims?

Indeed. There are instances where increasingly we're seeing regulators and consumers looking at statements that are being made about the sustainability or the origin of products that consumers are buying. But these companies not always have the data to back it. So in a digital passport, all of that data should be in there.

One of the main concerns are issues around data protection

and confidentiality. How should regulators address that? Should the data contained in digital product passports have different levels of access?

I fully agree with that. It makes absolutely no sense to share chemical composition data with a consumer. But it 100% makes sense to share chemical composition data with an end-of-life recycler. But then I need to verify that this user who accesses the information is a certified recycler, because otherwise I'm then giving out information that could, in theory, be sensitive.

Since we are talking about global supply chains, which impact can the introduction of digital product passports have for the EU's trade partners?

There are some connections to carbon accounting, for instance. Within there, there is this opportunity for new business models, especially when you start looking at a future lens with new legislation like the carbon border adjustment mechanism (CBAM). What the EU is trying to bring together in the CBAM is that if you're producing outside of the EU, then there should be a balancing effect of the carbon dioxide emitted by companies that relocate outside of the EU.

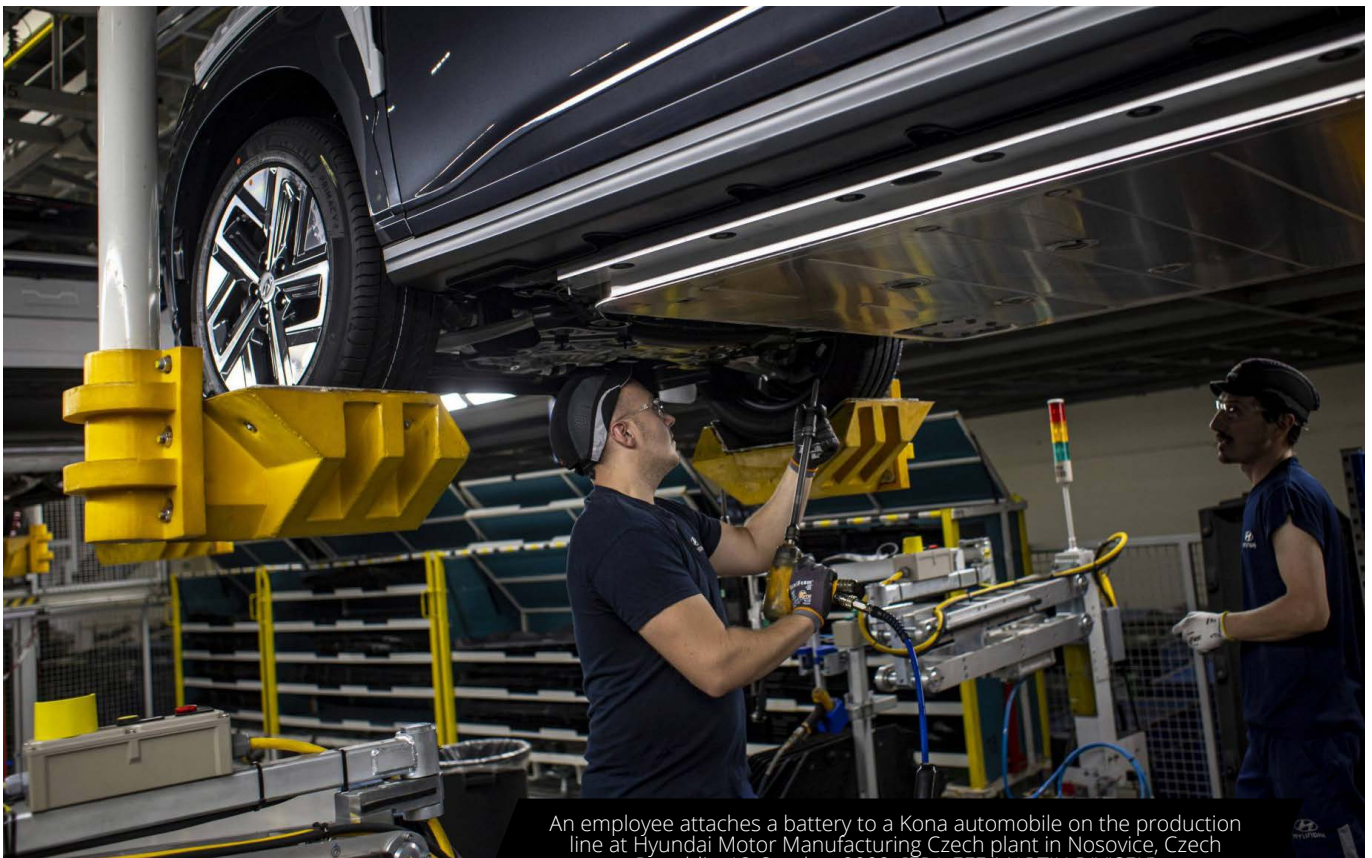
Let's fast forward five years when CBAM has become a real thing. And we have carbon pricing in other regions in the world. If I'm producing in different areas, and I can prove that my manufacturing facility in Asia has a photovoltaic, or ground source heat or wind turbines, and therefore has a reduction of impact comparative to its other production around in the region, that information would be held in the digital product passport.



EU battery watchers brace for tsunami of secondary legislation



By Anna Gumbau | euractiv.com



An employee attaches a battery to a Kona automobile on the production line at Hyundai Motor Manufacturing Czech plant in Nosovice, Czech Republic, 13 October 2022. [EPA-EFE/MARTIN DIVISEK]

While EU co-legislators are still busy discussing the details of the EU Battery Regulation, lobbyists following this file are already bracing themselves for a tsunami of secondary legislation that will decide on every technical aspect of battery manufacturing and recycling.

It's been nearly two years since the European Commission published its [proposal for an EU](#)

[Battery Regulation](#), a product that is still unregulated in the bloc's single market and that is meant to play a crucial role in the transition to electric mobility.

Beyond transport, batteries are shaping up to play a central role in the green and digital transition via devices like smartphones or portable computers that have become pervasive in our daily lives.

So-called triologue talks between the Commission, the European Parliament and the Council are still ongoing, with several issues still outstanding, such as due diligence for raw material supply chains or requirements over material recovery and recycling.

EU negotiators hope to reach a compromise on the Battery Regulation during a final triologue

session scheduled for December 9.

In the meantime, car manufacturers and the entire supply chain of battery makers who are closely following the legislation are already bracing themselves for a tsunami of secondary legislation that will follow the adoption of the regulation.

While the EU Battery Regulation is meant to provide a general framework, a lot of technical aspects will be decided in secondary legislation – in so-called “delegated acts” and “implementing acts”.

Implementing acts are adopted by the Commission after consulting an expert committee comprised of experts appointed by the 27 member states, therefore giving EU capitals a greater say. In contrast, delegated acts can only be rejected by the Parliament or the Council, but they cannot amend it like they do with ordinary legislation.

It is expected that as many as 32 delegated and implementing acts will complement the EU’s Battery Regulation.

All the technical information collected under those implementing rules will become available in a digital “battery passport” that will track the origin of all materials and components used in the manufacturing process of batteries.

Making sense

Because batteries are such complex products to regulate, experts agree that this is the right approach.

“It makes sense to approach these technical aspects with delegated acts as currently batteries are a completely unregulated

product, which is used in so many applications, and that shows the complexity of the regulation,” said Rita Tedesco, Head of Energy Transition at the Environmental Coalition on Standards (ECOS), an NGO.

“We will only see the actual shape of the Battery Regulation once all these pieces are adopted,” she explains.

The downside is that following the detail of these technical rules and regulations will be difficult, if not impossible for civil society groups with fewer resources.

“It might result in a continuous process over the coming years where stakeholders are required to follow the development of many implementing or delegated acts,” said Mark Mistry, public policy manager at the Nickel Institute, the global association of primary nickel producers.

“Independent of where concrete targets and numbers are decided upon: they should be based on technical feasibility, stakeholder consultations and impact assessments, taking into account environmental and socio-economic implications,” he told EURACTIV.

Technical but sensitive

And even though secondary legislation is supposed to deal only with technical aspects, some of those implementing rules can be politically sensitive.

These include requirements on due diligence that companies must comply with, the battery’s carbon footprint calculation, and the methodologies to calculate recovery targets and recycling efficiencies.

“These delegated acts will also have to define performance classes and maximum thresholds that will tell us whether a battery’s carbon footprint is too high for it to be placed on the EU market,” said Tedesco from ECOS.

How these calculations are designed could make or break the ambition of the EU Battery Regulation, experts believe.

For instance, these delegated acts will define how companies will be allowed to count and report their green energy use. How this is calculated will be “key to avoiding a greenwashing exercise,” said Alex Keynes, clean vehicles manager at Transport & Environment (T&E), a clean mobility NGO.

“We need to avoid a situation where companies can claim use of renewables by simply buying cheap green offsets in the form of guarantees of origin and without any real world link to the energy they are actually using to make the battery,” Keynes added.]

According to [calculations by S&P Global Mobility](#), global lithium-ion manufacturing capacity is expected to more than double by 2025. As battery production continues to ramp up internationally, the EU could set the standards for sustainable batteries worldwide, says Tedesco.

“Ambitious enough delegated acts can keep too polluting batteries out of Europe, and have a knock-on effect on the rest of the world, making batteries more sustainable everywhere,” Tedesco said.

Unease grows as EU green policies take the fast lane

By Anna Gumbau | euractiv.com



Experts say it makes sense to use a fast-track process for technical updates to legislation. But problems can arise when those deal with political issues. [Marc Bruxelle / Shutterstock]

Brussels is increasingly using emergency legislation and so-called delegated acts to implement its Green Deal agenda, a growing trend that is causing unease among EU co-legislators who are denied their democratic right of scrutiny.

When the European Commission tabled its controversial proposal to include nuclear and gas power in the EU's green finance taxonomy, it triggered an unprecedented political backlash from EU member states.

France and Germany intervened

at the highest level to weigh in on the process and pressured the European Commission to tweak the rules in their favour – Paris in support of nuclear and Berlin in support of gas.

Delegated acts are indeed controversial: EU member states and the European Parliament can only vote to reject the proposal tabled by the European Commission but cannot amend it in the same way they do with ordinary legislation.

If they fail to reach a majority against, the rules are adopted automatically after a two-month

period, which can be extended once.

But unlike the taxonomy, there are dozens of other delegated acts currently in the pipeline which haven't attracted the same level of political attention.

Among them are rules on the circular economy and batteries for electric cars that will see several key aspects regulated via delegated acts.

This includes the Ecodesign for Sustainable Products Regulation (ESPR), a piece of legislation presented on 30 March as part of the

EU's circular economy package.

The ESPR aims to expand the EU's ecodesign rules, which currently apply only to electric and electronic appliances, to a wider range of products such as textiles and furniture. And it gives the Commission powers to set product-specific rules via delegated acts.

Some experts say it makes sense to follow the delegated act approach because the ESPR covers a wide range of different products. "These are very complicated, multi-layered and granular topics, which require a knowledge mix of policies and technology," said Stefan Sipka, a policy analyst with Brussels-based think-tank European Policy Centre.

"It makes sense to go step by step and to have product-specific legislation ... This has already been applied to the ecodesign of electronics, which effectively made our appliances more energy efficient," he told EURACTIV.

Unease among EU capitals

But EU member states have different views.

Instead, they would prefer the EU executive to legislate on the ESPR using [implementing acts](#), which are adopted by the Commission after consulting an expert committee comprised of experts appointed by the 27 member states, therefore giving EU capitals a greater say.

Another example is the EU's Battery Regulation, tabled in December 2020 by the European Commission and which is currently being discussed for final adoption.

In its current form, the Battery Regulation foresees as many as 32

delegated and implementing acts to set technical standards about a myriad of aspects related to battery production and recycling.

As long as delegated acts are used to regulate technical details, there tend to be no complaints. But some of them will deal with potentially sensitive issues, such as the methodology to calculate the carbon footprint of batteries or the quantification of their recycled content.

Moreover, the massive amount of legislation has made it considerably difficult to follow legislative developments, experts say.

"In the case of the Battery Regulation, it is reasonable to use delegated acts due to the complexity of some of the provisions and methodologies that need to be adopted and to ensure the main regulation can be agreed by policymakers on time," said Alex Keynes, clean manager for vehicles at Transport & Environment (T&E), a clean mobility NGO.

"However, we need to be very careful when delegated acts are used to change substantive elements of legislation," Keynes warned.

Egregious' past examples

While secondary legislation is considered to be a reasonable approach for technical aspects of legislation that need to be designed by experts, EU policy watchers recall some past instances when it was used to regulate more sensitive topics.

"One example was the implementing legislation on real-world driving emission tests for vehicles, when a delegated act changed how much pollution vehicles were legally allowed to emit on the road," T&E's Keynes told EURACTIV.

The most notorious example, of course, was the European Commission's proposal to include nuclear and gas investments in the EU's sustainable finance taxonomy.

"The delegated act on the EU taxonomy was also an egregious example, which gave the Commission power to legislate on a very political issue," Keynes said.

With just five years to put the key aspects of the European Green Deal into law, using secondary legislation probably makes sense to fast-track certain technical aspects of law-making.

"Deciding on all technical aspects in secondary legislation prevents delays in the political process," said Mark Mistry, public policy manager at the Nickel Institute, the global association of leading primary nickel producers.

"On the other hand, there is a risk that decisions on topics with both a technical and a political dimension might be pushed into the area of secondary legislation, potentially resulting in decisions taken without involving all relevant stakeholder groups sufficiently," he told EURACTIV.

For people like Mistry, who are trying to keep track of regulatory developments in a broad range of areas – such as batteries, renewables, chemicals, and aerospace – this means EU legislation is becoming more challenging to follow.



PROMOTED CONTENT

DISCLAIMER: All opinions in this column reflect the views of the author(s), not of EURACTIV Media network.

Product passport legislation and the growing role of secondary legislation

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By Mark Mistry | The Nickel Institute



The European Commission published its proposed EU battery regulation in December 2020. After almost two years of discussion, the EU institutions are now in the final stages of negotiating the details. It could be adopted in December 2022, with entry into force to follow in 2023.

Mark Mistry is a Senior Manager, LCA & Sustainability at Nickel Institute.

The new EU battery regulation is a top priority for all EU institutions. It defines the regulatory framework

for the ambitions of the European Commission and member states to establish a full EV batteries value chain in Europe. It is therefore remarkable that – despite all EU institutions committing to find compromises swiftly – it will have taken over two years for the new regulation to be adopted and enter into force.

Complex and ambitious

The drafting of the regulation took longer than anticipated because of the complexity of both the proposal

and the EV battery value chain as well as the desire to regulate all steps from cradle to gate – from mining over manufacturing, and use, to the end-of-life management. Furthermore, covering a wide range of dimensions (technical, environmental, economic, and social) has turned out to be highly ambitious.

The other aspect to consider is the conceptual idea behind the new battery regulation. It is seen as a blueprint for future EU product legislation, establishing a

digital product passport with all its complexities and covering all steps of the product life cycle. Getting things right from the start is therefore of critical importance for all EU institutions and requires intensive consultation.

The product passport is a key element in the new battery regulation. It will provide customers with information, such as a battery's carbon footprint. The idea of this digital passport is that in the future it will include more sustainability and performance-related information to help customers make informed purchasing decisions. Collecting and aggregating information for such a complex value chain as the one for EV batteries will be a major challenge in the years to come.

A blueprint for future product regulation

The proposed EU Ecodesign for Sustainable Products Regulation (ESPR) published at the end of March 2022 follows the concept of the blueprint established in the proposed batteries regulation. It aims at making sustainable products the norm in the EU.

The initiative establishes an EU framework to assess products throughout their life. It covers a wider range of dimensions and focuses on sustainability aspects such as durability, energy and resource efficiency, reparability, and recyclability. It favors recycled materials, promoting the concept of a circular economy.

With its revision of the EU Ecodesign rules and the extension to non-energy related products, the ESPR assesses possibilities to improve the product sustainability performance at the design stage. It also foresees the development

of digital product passports accompanying the products in scope – textiles, electronics, chemicals, and steel.

Technical issues and secondary legislation

Secondary legislation where technical aspects and key requirements will be decided on in more detail will need to be adopted by the Commission in the future and will play a critical role. As in the case of battery regulation, we can expect a digital product passport to accompany products in the future to help customers take sustainability aspects into account in their decision-making.

The approach of the European Commission to define technical issues in various pieces of secondary legislation is not new and is common in EU regulation. Technical matters like methods to calculate targets such as recycling efficiencies require input from technical experts. What is new is the great extent to which secondary legislation will be needed to set and define important aspects and requirements of the battery regulation – a trend that we also expect to continue in future product legislation.

Separating the technical from the political

It has to be acknowledged that deciding on such complex matters between the EU institutions in the context of a regulatory process might lead to serious delays. Separating the political aspects from the technical matters is therefore an approach that in general should be supported by stakeholders as it ensures both efficiency and effectiveness of the regulatory process.

On the other hand, there is a risk

that decisions on topics with both a technical and a political dimension might be pushed into the area of secondary legislation, potentially resulting in decisions taken without involving all relevant stakeholder groups sufficiently. It also will result in a continuous process over the coming years where stakeholders are required to follow the development of many implementing or delegated acts.

Finding the balance

The digital product passports that we can expect in the future to accompany articles will contain a significant amount of data and information related to their sustainability performance. The development of such digital passports, the methods, and approaches to calculate targets, and how the information is displayed will require intense technical debates.

The battery regulation also presents an opportunity to agree on methodologies that can be applied to future product initiatives. Independent of where concrete targets and numbers are decided upon: they should be based on technical feasibility, stakeholder consultations, and impact assessments, taking into account environmental and socio-economic implications.

The European Commission will therefore have to find the right balance in the ongoing discussion around the sustainable products initiative and Ecodesign rules, as well as for future product legislation. Defining technical issues in secondary legislation and ensuring that stakeholders remain involved and have the possibility to contribute and share their expertise and concerns should be built into the process.



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