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Committee on Environment
and Public WorksSubcommittee on Chemical Safety, Waste Management,
Environmental Justice, and Regulatory Oversight

Washington, D.C.

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HEARING ON SOLUTIONS FOR SINGLE-USE WASTE: EXPANDING REFILL AND
REUSE INFRASTRUCTURE

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Subcommittee on Chemical Safety, Waste Management,

Environmental Justice, and Regulatory Oversight

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The subcommittee met, pursuant to notice, at 9:45 a.m. in room 406, Dirksen Senate Office Building, the Honorable Jeff Merkley [chairman of the subcommittee] presiding.

Present: Senators Merkley, Mullin, Carper, Whitehouse.

THE HONORABLE JEFF MERKLEY, A UNITED STATES SENATOR FROM THE
STATE OF OREGON

Senator Merkley. Good morning. Welcome to the third hearing of the Chemical Safety, Waste Management, Environmental Justice, and Regulatory Oversight Subcommittee on environmental and public health dangers and solutions in regard to plastics.

The folk singer, Pete Seeger, once said if it cannot be reduced, reused, repaired, rebuilt, refurbished, resold, recycled or composted, it should be restricted or redesignated or removed from production. We are here to explore that philosophy in the context of how to have our containers and packaging have longer life and serve us better than the single-use world we are often living in.

Generations have grown up believing the mantra of the three Rs, reduce, reuse recycle, and then everything is resolved. But we know with plastics only about 8 percent is recycled. I think this past year it dropped to 6 percent. Instead, it gets the three Bs: it is buried, it is burned or borne out sea. It really has a remarkable, almost near eternal, life span.

Plastics break down into smaller and smaller pieces until they are microplastics. They are in our lungs, our bloodstream, in the breastmilk we feed our babies, and are full of all kinds of chemicals we don't necessarily want in our bodies, our bloodstream or our breastmilk. That is to say nothing of the

massive amount of fossil fuels needed to produce single-use plastics.

I was thinking back to when I was in grade school and Alpenrose Dairy had a box on our front porch. They dropped off the milk in a glass jar. Then the glass jug went back into the box and according to whatever you ordered, other products showed up. Those glass jars got used eternally.

After my senior year of high school, I was working as a mechanic. The lunchroom had a vending machine. I would get an orange soda in a glass bottle. Every time one was different, I would put it up on the wall and by the end of the summer, it had 8 to 12 different evolutions because the bottles were simply washed and reused, and reused and reused.

Well, the old sometimes becomes the new. Ideas we had in the past are looked at again as we face different issues. With reusable containers, consumers can either refill containers or return them to be sanitized, refilled or restocked on store shelves.

The Ellen MacArthur Foundation, which is represented here today by one of our witnesses, estimates that replacing 20 percent of single-use plastic packaging with reusables would be an opportunity worth at least \$10 billion of economic activity. The World Economic Forum estimates that reusing just 10 percent of plastic products would cut the annual amount of ocean plastic

pollution by 50 percent.

This is not theoretical. We are already making recycling work in Oregon. Oregon was the first State to require that all bottles are returnable with a deposit and 90 percent of our bottles are recycled. This program employs about 500 people across the State.

Even some of our Oregon brewers are now using a common beer bottle that can be cleaned and refilled up to 40 times, meaning the bottles do not need to be crushed, melted or remade after every use. That actually does go right back to the experience we had early in the bottle bill in my State.

It is not just bottles we are talking about, not just drinks we are talking about. At 25 Fred Meyer stores in the Portland metropolitan area and some Giant Grocery Stores here in D.C., customers can buy products from name brands like Cascade, Clorox, Gillette in reusable containers from Loop, an innovative company that is also represented on today's panel.

We are fortunate to have a few witnesses who will help us to learn more about how you build a culture and economy of reusables. We are joined by Dacie Meng from the Ellen MacArthur Foundation which focuses on the issue of plastics and rebuilding a circular economy. We are also joined by Clemence Schmid, who is the General Manager for Loop, a social enterprise whose mission is "eliminating the idea of waste." With them is Tim

Debus, the President and CEO of Reusable Packaging Association whose member companies promote reusable transport packaging systems like pallets, bins and containers.

Thank you all for being here this morning.

With that, let me turn things over to the Ranking Member of the committee, Senator Mullin.

[The prepared statement of Senator Merkley follows:]

STATEMENT OF THE HONORABLE MARKWAYNE MULLIN, A UNITED STATES
SENATOR FROM THE STATE OF OKLAHOMA

Senator Mullin. Thank you, Mr. Chairman.

I would like to start with thanking all the witnesses for attending the hearing today. We appreciate your taking the time to be with us today. It is not always an easy trip to get here to Washington, D.C. It is definitely not an easy trip getting back home. So we do want to thank you for taking the time to enlighten us and share your thoughts and your experiences.

As I said in my first subcommittee hearing, I believe free market innovation is the best way to promote sustainability in all forms of waste management, whether it be in reusable packaging or recycling. However, as we discuss potential solutions, we must ensure America's supply chains remain productive and competitive in the global market.

As we have seen in America and in other countries, a one-size-fits-all mandate is not necessarily the right solution, especially for smaller businesses who are less likely to be able to absorb those extra costs. Businesses should not be forced to spend time and capital on unnecessary and erroneous regulations that do not serve their customers or their business model.

Regulatory overreach has the potential to hamper free market solutions, including for reusable and refillable packaging. These solutions should not require a heavy hand of

government to be successful in the marketplace.

Our Nation's economy thrives when private industry has the right to choose how to tackle these hard-to-address issues in a way that provides realistic, affordable, and attractive solutions for both consumers and businesses. Otherwise, these ideas simply won't survive.

Again, I want to thank our witnesses for being here today and look forward to your testimonies.

I yield back.

[The prepared statement of Senator Mullin follows:]

Senator Merkley. Thank you very much.

We will now turn to our panel. We are grateful for your joining us today and bringing your experiences and knowledge.

We will begin with Dacie Meng from the Ellen MacArthur Foundation.

STATEMENT OF DACIE MENG, POLICY AND INSTITUTIONS SENIOR MANAGER,
NORTH AMERICA, ELLEN MACARTHUR FOUNDATION

Ms. Meng. Thank you so much.

Good morning, Chairman Merkley, Ranking Member Mullin.
Thank you so much for the opportunity to testify today on this
important topic.

As you said, I am Dacie Meng, the Policy and Institutions
Senior Manager at the Ellen MacArthur Foundation in North
America. EMF is a non-profit organization with the aim of
accelerating the transition to a circular economy in order to
tackle some of the biggest challenges we face today like climate
change, biodiversity loss, waste, and pollution.

This work is more important to me than ever, as I have just
returned from maternity leave last week after having my second
son. I am very grateful to be here with you all today and be
talking about this.

One of EMF's key areas of focus is plastics. We have
published and continue working on research on the topic. We
have mobilized businesses and other leaders toward a more
circular economy for plastics.

In collaboration with the UN Environment Programme, our
Global Commitment has united more than 500 organizations,
representing 20 percent of all plastic packaging produced
globally, behind a common vision of a circular economy for

plastics that includes reuse. And we have convened the Business Coalition for a Global Plastics Treaty together with WWF.

That brings together over 130 businesses and financial institutions committed to supporting the development of an ambitious, effective, and legally binding UN treaty to end plastic pollution. The Business Coalition has called for global support for reuse policies.

Today, I will quickly cover why reuse is key to addressing plastic pollution; what we mean when we talk about reuse; why we need policy intervention; and what policy tools can best support reuse systems.

To start, reuse is key to addressing plastic pollution. No single strategy can sufficiently reduce plastic leakage into the oceans. Reducing plastic pollution requires a comprehensive and integrated set of solutions from material redesign, plastic reduction, substitution, and reuse, all the way to improved recycling and disposal systems.

Reuse is an essential component in this mix, and has incredible economic potential. As Senator Merkley said, replacing 20 percent of single-use plastic packaging with reusable materials represents a \$10 billion opportunity. Furthermore, scaling reuse options and new delivery models is key to reducing material consumption, decreasing single-use plastic applications, taking effective action against plastic

pollution, and capturing co-benefits.

To accelerate collaborative action on scaling reuse, EMF is currently working with reuse partners and experts to show how scaled reuse return systems can perform economically, environmentally, and experientially in comparison to single-use.

No, for what is a reuse or a use return system. Reusing packaging means that the packaging is refilled or used again for the same purpose for which it was conceived. Reusable packaging has been designed to be or has proven it can be reused a minimum number of times. By contrast, single-use packaging is designed to be used just once.

When talking about reuse, it may be helpful to think of business-to-consumer reuse in four different categories: packages refilled at home; refilled on the go; returned from home; or returned on the go.

These systems present countless potential benefits, but there are challenges to implementing reuse models in practice resulting in the need for policy intervention to fully capture the reuse opportunity.

Reuse will be a crucial piece of the solution to reduce plastic pollution, but business as usual cannot get us there. Current commitments will only get us a 7 percent decrease in plastic flow into the ocean by 2040. We need policy intervention to address the barriers to building and scaling the

shared infrastructure and systems required to make the economics work and maximize the environmental benefits of reuse.

The Business Coalition for a Global Plastics Treaty has called for policy support to encourage further investment into reuse and refill systems recommending realistic targets, combined with effective economic incentives, definitions, and metrics to shift the supply chain.

Businesses want a level playing field and they need policy to get there. We need ambitious, binding reuse targets to reach the scale and shared infrastructure needed. We need measures to make the economics work like extended producer responsibility; deposit return schemes, tax breaks, grant funding, et cetera. We need harmonized definitions and design to help ensure we are building efficient, beneficial and scalable systems.

These policies will keep packaging in the economy at its highest value for as long as possible and avoid the production of virgin plastics. It is best if these policies are packaged together at the Federal level and are consistent with the action underway at the global level.

While local and small-scale solutions have demonstrated the opportunity and will continue to play a key role in the implementation of reuse systems, we need cohesive Federal action to accelerate progress.

Thank you for your time and I look forward to your

questions.

[The prepared statement of Ms. Meng follows:]

Senator Merkley. Thank you. Welcome back from maternity leave and congratulations. You said it was your second son?

Ms. Meng. Yes.

Senator Merkley. That is just awesome. The best part of life is raising those kids.

We are going to turn next to Clemence Schmid, who serves as General Manager at Loop Global. We look forward to your testimony.

STATEMENT OF CLEMENCE SCHMID, GENERAL MANAGER, LOOP GLOBAL

Ms. Schmid. Thank you, Chairman Merkley and subcommittee members, for the opportunity to speak at this hearing.

I am Clemence Schmid, General Manager of Loop, a global reuse platform launched by TerraCycle. As background, TerraCycle, headquartered in Trenton, New Jersey, is on a mission to eliminate the idea of waste. We employ over 500 people providing national recycling, recycled content and reuse services in 20 countries for 20 years.

We run national platforms to collect and recycle, how to recycle products and packages ranging from flexible food packaging to personal protective equipment, toothbrushes to pill blister packs, and even cigarette butts and dirty diapers. TerraCycle manages the largest contact lens and eye care recycling program in the United States, and is the world's leading recycler of coffee capsules and beauty waste to just name a few.

TerraCycle launched Loop in 2019. Loop enables brands and retailers to shift from single-use packaging systems to reusable ones in the most convenient way possible. As a result, we have partnered with the leading retailers in the United States, France and Japan from Walmart to Carrefour as well as 200 leading consumer goods companies from Proctor and Gamble to Nestle.

In focusing on the three most important stakeholders to transition from disposable to reusable consumption, consumers, brands and retailers, the primary goal of Loop has been to enable the transition to reuse in the least disruptive way possible.

For consumers, the shopping experience is the same. Simply buy your everyday product at your preferred retailer. There is no requirement to clean or refill oneself. The only new concept is a fully refundable deposit attached to each container at purchase. The deposit is then reimbursed in full upon the return of the empty package at any participating location regardless of where it was purchased. As you can see here, the goal is to make a reusable purchase feel like a disposable one.

For brands, Loop is able to integrate any disposable product from baby food to motor oil to peanut butter, shampoo or laundry detergent with the goal of driving the least amount of change to existing supply chains as possible. In fact the only change to enable reuse with Loop was to shift from disposable containers to reusable ones.

For retailers, everything stays the same as with disposable product distribution. The only change is to enable the Loop return bin at the front of their store.

Loop acts as a central platform steward and is operationally the waste management function of reuse. We

collect back the empty use container, sort, store and clean them and return deposits. Our objective is make reuse as convenient and affordable as single-use.

Reuse has to be a part of our future. Reuse is better for the environment. This has been shown multiple times in different studies like third party-reviewed life cycle assessments from both the private and public sector.

Reuse creates more jobs. It creates significantly more domestic jobs than disposal or even recycling. Reuse avoids the negative impact of disposable plastic production, a form of pollution that permanently affects disadvantaged and minority communities in the United States.

Reuse is financially viable. It has run at scale in the United States until the 1950s and to date runs at scale in Canada with beer all the way to Germany with most beverages as well as in the business-to-business sector with secondary and tertiary packaging.

By treating packaging as an asset versus the cost of good salt, Loop's platform enables manufacturers to innovate and create better packaging. In the process, manufacturers become financially motivated to make their packages as long lasting as possible.

Reuse is proven with consumers, brands and retailers. The key to unleashing the full environmental and economic

opportunity is simply to scale, more product available in more stores and more return points.

But scaling reuse requires investment from private actors. To invest, the business needs certainty. We believe the government can support this in two ways.

Support through legislation. For example, we are very supportive of reuse being a part of Senator Merkley's national bottle bill and would recommend not to limit it to bottle only.

Providing public funding to scale reuse funding should be focused on the infrastructure creation and the reuse platform operators. Now is the moment to act. Delaying action could stall the measurable progress that has been made towards a more sustainable future and set us back decades.

With existing consumer demand and voluntary action underway, government support will be the catalyst to turn reuse into a full-scale national reality.

I urge you to actively support reuse through legislation and investment. I appreciate the opportunity to provide testimony and would be pleased to address any questions.

Thank you.

[The prepared statement of Ms. Schmid follows:]

Senator Merkley. Thank you very much for bringing your expertise on this model to the panel for discussion and education. We appreciate it.

We are going to now turn to Tim Debus. Welcome.

STATEMENT OF TIM DEBUS, PRESIDENT AND CEO, REUSABLE PACKAGING
ASSOCIATION

Mr. Debus. Thank you, Chairman Merkley, Ranking Member Mullin, and members of the subcommittee for the opportunity to share insights on reusable packaging and the important role of reuse infrastructures for not only environmental benefit, but also for economic value creation and social wellbeing.

My name is Tim Debus and I represent the non-profit, global trade organization for the reusable transport packaging industry. The Reusable Packaging Association, or RPA, consists of businesses that supply, use, and provide services to supply chain packaging products like pallets, bulk bins, containers, and trays, for their continuous use in a managed system featuring the packaging's recovery, maintenance, and return for their intended purpose.

Today, RPA member companies are collectively involved in handling or servicing billions of reusable transport movements each year for commercial goods worldwide. Still, overall, reusable packaging is the minority share in the supply chain.

I want to emphasize three points on reusable packaging as part of the solution for single-use waste. First, reuse is not about the material or product, but the system. No packaging can be considered reusable unless it can be collected, returned, and prepared cost-effectively for another use.

We need to be systems-thinkers when it comes to solving complex environmental problems. This is the crux of reusable packaging in which collaboration and coordination within operating systems lead to eliminating solid waste and pollution.

Also, reusable packaging is material neutral, typically made from plastics, wood, aluminum, or glass. The key is product design for durability, not disposability, using safe and recyclable materials, and having the system in place to ensure repeated use and end-of-life recycling.

Plastic-based reusable packaging can be very effective in a managed system where product utility is extended and plastic material is valued. In my written testimony, I cite several real-world examples of how RPA member companies are keeping plastics in circulation and out of the environment.

My second point is that reuse systems are really about getting and generating new economic growth and value. If we only consider reusable packing in response to environmental problems or sustainability quotas, then we are missing the big picture opportunity.

Reusable products can be designed with feature-rich properties that optimize performance in user experience and embed technologies for smart data capturing outputs. These properties can save money in transportation and warehousing, reduce food damage and waste, offer ergonomic designs for worker

safety, perform with automated or robotic handling systems and most excitingly, bring tech-enabled visibility to supply chains.

Reuse also builds resiliency in business operations by being available and already available for use, avoiding volatile raw material pricing and supply constraints that can interfere with the endless manufacturing of single-use products. A national strategy that incentivizes reusable packaging systems can have far-reaching economic impacts. With reuse, we can achieve both economic and environmental prosperity.

My third point is that there are many Federal policy opportunities to support reuse infrastructures, but we need to prioritize reuse and broaden the material scope. Less than two years ago, the Bipartisan Infrastructure Law heavily invested to transform municipal solid waste management and recycling. Now, Congress has the opportunity to prioritize game-changing investments in reuse systems, striking the right balance on complementary pieces to the puzzle, reuse for waste prevention, and recycling for waste management.

A national strategy in advancing reusable and refillable packaging systems should prevent waste of all material types, not just plastics. We should institute consistency across waste streams to avoid fragmented efforts in our source reduction initiatives and change behaviors and culture for the responsible use of all resources.

A final comment is that is lesser known but is very important to our industry, is the need to strengthen enforcement of crime laws and prosecutions pertaining to the theft of stolen reusable packaging assets. We make great products with valued materials and far too often, they are getting stolen, diminishing the reuse potential.

We appreciate the time to be here today and I look forward to any questions that you may have.

[The prepared statement of Mr. Debus follows:]

Senator Merkley. Thank you all. We are going to dive into five-minute periods.

Ms. Meng, I think your team is involved in the international discussion because plastics in oceans, for example, is not just an American challenge but a global challenge. I think the Foundation convened the Business Coalition for Global Plastics Treaty.

What is really the core goal of that? Is it to set targets or is the goal to have requirements that each nation basically says yes, we are going to do X, Y, Z to accomplish those goals?

Ms. Meng. If I understand your question, it is about the global UN negotiations around the Global Plastics Treaty and whether the Business Coalition will be looking at nationally determined contributions or national action plans where countries are deciding what they are doing or if there will be kind of mandatory components to the International Treaty.

From EMF's perspective, and I believe also the Business Coalition's perspective, we need binding reuse targets on the topic of reuse in particular but binding targets in the treaty itself. Rather than having countries self-determining what those targets will be, of course, they will be implemented by the individual countries.

Senator Merkley. Right now, I believe the U.S. is pushing to not have binding targets and set up, if you will, kind of a

happy talk about what could possibly be achieved. But that won't get us there.

Ms. Meng. I agree.

Senator Merkley. Ms. Schmid, I am picturing, for example, the plastic jug that I have with liquid laundry detergent. You spoke about fully refundable deposits. In Oregon, we have a deposit on bottles, a 10-cent deposit. It has resulted in about 90 percent return rate.

Is the concept extending that model to everything else, shampoo bottles, laundry detergent bottles, so on and so forth?

Ms. Schmid. The system is about bringing the value into the package. We know deposit is a very good way to do it without burdening the citizen. So yes, it is about bringing a deposit on everything.

Senator Merkley. We have a system in Oregon where you throw everything into a bag. Then the bag is tossed into a tray at a warehouse where a computer takes a picture of it and immediately evaluates how much of those things are recyclable. It is an amazing system to watch in action and works really well.

If that type of program was extended to other plastic bottles of all kinds, do you see that as workable? Has any State undertaken to really expand? It is really set up for lots of things that look like a soda bottle. Other plastic

containers are maybe much larger and may be different in shape. Can the same basic system be expanded?

Ms. Schmid. That is about building the infrastructure that is tailored for reuse as opposed to recycling as we have. In reuse, every container is sorted individually. This is what Loop has been demonstrating not only in the U.S. but also in Europe and in Japan. So the technology would be close to what you described, but would be a step up in order to be able to isolate packaging, shape, material and content.

Senator Merkley. I have these bottles. Currently some of them are reused through that system I described; some are reused like glass bottles. But all the plastic ones are essentially ground up for recycling which means different types of plastic have to be sorted and what, how much can be rebuilt from them.

But you are really, if I understand, you are saying the best solution would be for the laundry detergent bottle to be able to be refilled and reused, rather than ground up to recreate a new product?

Ms. Schmid. Yes, absolutely. It is much better to reuse product that is existing than having to transform it even through recycling.

Senator Merkley. Say that bottle arrives at a central warehouse with other recycled plastics, how do we get that bottle back to the manufacturer to be refilled and restocked on

the shelf? Is that really a practical strategy?

Ms. Schmid. It is happening today in the United States and in other countries. That is what Loop is doing.

The way we operate is, to the point you are describing, we are bringing all of the bottles to a central location where they are being sorted, stored, cleaned and being sent back to each of the manufacturers.

Senator Merkley. The manufacturer does not have to worry about any of the complexities of the cleaning. When you have a big container of that particular bottle, you can ship it back to the manufacturer and they throw it back into their production loop?

Ms. Schmid. Absolutely correct.

Senator Merkley. My five minutes are up. I will turn to Senator Mullin.

Senator Mullin. Thank you, Chairman. Once again, thank you to the witnesses for being here. I will start with Mr. Debus.

In your testimony, and by the way, your voice carries quite well. I was listening to you and I thought maybe you should have a voiceover job too. I was impressed by that. It reminded me of my colleague from Oklahoma, James Lankford. He has one of those voices, too. Not much of a face, but a good voice. I am kidding. He is a very good friend of mine.

In your testimony, you stated reusable packaging companies in the supply chain continue to demonstrate success in responsible management of plastics. How can reusable packing support upcycling and recycled plastic content?

Mr. Debus. There is a tremendous amount of great activity taking place in the market. RPA member manufacturing companies as well are taking back 100 percent of their products from the user community in order to recycle and reprocess into new product manufacturing. It is part of that whole circle system, the closed loop, if you will, of bringing back their products. They are of value so they can use them and regrind and recycle material into other products.

They also really look to put high recycled content rates into their manufactured products. One of our member companies has an average of over 80 percent of recycled content in their pallets and their bullpens of plastic-based products. So they are achieving full circularity in terms of utilizing plastic products, but then getting those products back and continuing to use that material when it is time for its recycling in its intended reuse.

For upcycling, it is basically taking the waste material of recycled resin and putting it back into useful products. If you look at the EPA waste hierarchy pyramid, it is going from the lower part of the pyramid to going up from recycling to source

reduction of reuse.

Or in the circular economy technical cycle, it is going from the outer loop of recycling to the inner loop of preferred activity. It is really an upcycling process of taking the plastic material and putting it into useful and valuable products that can go from recycling to reuse or waste management to waste prevention and allow for tremendous value associated with the continued life of that product.

Senator Mullin. How prevalent is reusable packaging in a supply chain right now in different or various markets?

Mr. Debus. Reusable packaging for the supply chain, they are the workhorses of commerce. There is an estimate of all the industrial and consumer products that move in this Country, over 90 percent on a pallet, for example. So they are behind the scenes but are ubiquitous in the economies and markets all around us. It does range pretty considerably between vertical markets.

The automotive industry, for example, is a big user of reusable packaging. They have tighter loops between parts to assembly and they definitely have that continuous program in terms of distributing products for their use.

The retail industry is where we have a lot of work that is needed. Retail could definitely use some additional penetration or adoption associated with reusable packaging. So there is

great variability associated with the market adoption of reusable packaging for the supply chain.

Senator Mullin. When we start talking about reusable, which is a great concept, the Chairman brought up the fact that milk deliveries used to be done that way, I understand that. But every time you touch a product, there are labor costs. Cost is associated with anything that we do. It has to be economically reasonable for us to be able to do that. So when we start talking about reusable, you realize that the most cost in every product out there is labor.

How do we combine those two because each time you touch that product, every time you touch this bottle, touch a reusable product, there are costs associated with that. How do you merge those? Because we have labor costs going through the roof in the United States, which is good. I am not saying that is a bad thing but it also comes with a cost.

How do you make that efficient for the consumers? Because ultimately that is who is buying the product. Do any of you want to take that on? That is a hard one, right?

Ms. Schmid. I am happy to kick off. It is a great question.

There is cost of labor in production of single-use packaging today also, so they are not limited to only reuse. I think you are touching on a very good point, where you have

proof in business modeling exercise. We talked about businesses which are scale and are profitable on the reusable side versus single-use. That is because you are also making savings on reusing your assets as many times as you can.

Mr. Debus. I was going to say this is where scale or value becomes critical because with value, you are able to drive down the efficiencies at certain touch points, filling up trucks with full loads when they are being transported say from point of collection to point of maintenance or back to the packing lines, for example. When we talk about scaling reuse, it really is about having the volume efficiencies to be able to optimize the touch points, drive costs down each step of the way.

The unique thing about reusable packaging is that it really brings the supply chain or consumers together with brands, because you all care now about the packaging. The packaging has value to it today, whereas today, before with single-use, you basically passed that packaging down and absolved yourself of no longer having accountability or responsibility for it.

With reusable packaging, the touchpoint is everyone is benefitting from the reusable packaging properties that are designed to be able to work within each of those steps along the supply chain.

But it really requires coordination and working in partnership among those who touch the product to be able to

optimize those savings as well. That is where that system thinking comes into play, is to be able to really generate the biggest economic and environmental outcome associated with reuse.

Senator Mullin. Thank you. I went over my time. I apologize for that.

Senator Merkley. Thank you.

Senator Whitehouse.

Senator Whitehouse. Thank you, Chairman Merkley. Thank you to our Ranking Member for continuing to focus on the issue of plastics because it is an unnatural substance and does not biodegrade. It just breaks down into smaller and smaller pieces.

We are seeing it increasingly in things like women's breastmilk, in things like the contents of a baby's diaper, in things like raindrops falling from the sky in Colorado. Focusing on preventing this and also understanding what the potential harms are of all that microplastic and all that plastic waste I think is a very valuable use of the committee's and subcommittee's time.

My plaudits to Senator Merkley for whom this is a great cause and passion.

Ms. Schmid, Senator Sullivan and I have done a couple of plastics bills, Save Our Seas and Save Our Seas 2.0, and we are

in the process of working on Save Our Seas 3.0 right now. One of the areas on which I expect we will likely focus is the area of recycling and how spectacularly unsuccessful ordinary recycling presently is with less than 10 percent of what you put in your blue bin actually ending up recycling, with less than 2 percent of recycled content in new plastics.

Trying to figure out how to make recycling work I think is going to be a very important piece of this. I would love to have your advice on what you think the best things are that the Federal Government could do to promote more effective recycling and to eliminate sham recycling.

If you have a quick response, I would welcome it now but I would also encourage you to take that back as a question for the record and give a more fulsome response if you would care to.

Ms. Schmid. Thank you, Senator Whitehouse, for the question. It is a topic that would require a bit more sustained response so I will take it back.

Senator Whitehouse. That would be fine.

In your sector of the economy, Mr. Debus, are there incentives or other things the government could do to encourage more reuse? In particular, can we get rid of peanuts, those damned little foam things?

Mr. Debus. Right, make reusable peanuts? That is a nice idea. We should talk after the hearing.

No question about it, the one thing we have to look at is that reuse can be very complex in terms of the requirements of that whole system to work. Many times it is an investment. Companies are putting capital forward to produce a pool of reusable assets or are changing their processes internally and it requires additional manpower or streamlining operations in order to make it work. It is an investment in process change.

Senator Whitehouse. Do me a favor and make some recommendations for us, if you would, on how we can support those process changes because I think it is a win-win situation if you can get over the initial hurdle of the investment required to make the process changes.

Mr. Debus. Yes. Thank you.

Senator Whitehouse. Ms. Meng, welcome. Thank you for being here.

The other bill I am working on is called the REDUCE Act. That would put a fee on virgin plastic that is designated for single-use plastic products. At the moment, one of the things that is holding back recycling in that area is it is cheaper to make it new than it is to get out of recycling.

It is very hard to convince economically motivated entities like corporations to do things that are against their economic interests. So it is a policy choice we have to make to put recycled plastic and new manufactured plastic on the same

footing. That is the definition of what economists would call a negative externality, that by virtue of using the new plastic, you are adding more plastic to the system making life more dangerous, adding more waste to the oceans, adding more waste to the system and putting more of a burden on people.

If there is no charge for that, you are letting people get away with something that economists would say they should not be allowed to get away with. So if you are a pure market economist, you would want to address this problem. What is MacArthur's advice in this area?

Ms. Meng. Thank you for that question and excellent thoughts on the topic.

I think you are entirely correct that we need to be internalizing these externalities and bringing ourselves to a level playing field. A fee on virgin plastics does not mean it refers to single-use plastics. I think there is a logical way to do that. There are countless tools that we can use, but the reality is that we need to be doing something to level the playing field.

Senator Whitehouse. Take a look at the REDUCE Act and get back to us with any comments or thoughts you might have, if you do not mind.

Ms. Meng. Absolutely.

Senator Whitehouse. Terrific. Thank you.

Mr. Chairman, thank you very much for this. Again, I think a lot of American corporations have developed a partial market economy business model as to free market when it comes to their pricing and selling their product but passing on to the public and socializing the externalities that they may cause, that just isn't market theory. The selective use of market theory has caused a lot of harm whether in carbon emissions, plastic waste or across the board. Thank you for continuing your focus in this area.

Senator Merkley. Thank you very much. We are looking forward to Save Our Seas.

Senator Whitehouse. Save Our Seas 3.0.

Senator Merkley. Save Our Seas 3.0, with bipartisan collaboration. I know those of us who live on the coast, you are doing that with Senator Sullivan, right? I know we hear a lot about Alaska's concerns about the Pacific gyre and the amount of plastic waste that washes up.

Senator Whitehouse. We pick it up on our shores with garbage bags. They have to pick that up on their shores with front-end loaders and dumpsters because of the Pacific flow of plastic waste.

Senator Merkley. Absolutely. Thank you.

I think it is an interesting point about the economics involved. My impression, going back to when Oregon first

implemented recycling of bottles, and all the bottles were glass, is that those who delivered the product were happy to have the bottles washed and reused because it was cheaper than buying new bottles because it takes a lot of energy to create a glass bottle melting.

It was the folks who made the bottles who, at that point, were extremely resistant because obviously they would sell less bottles if the existing bottles were reused.

But with plastics, the economics often are different in that it can be cheaper, as my colleague pointed out, to make a new one than to recycle an existing piece. But it is the externalities of the impact of that plastic downstream that aren't taken into account.

I wanted to ask you, Ms. Meng, as the Foundation has worked with partners to implement larger scale reuse and refill, are there like a top three, here are the biggest obstacles you have encountered?

Ms. Meng. That is an excellent question. I will look to the rest of the panel also for their experience.

I do think that the challenge we see from folks, is we have had businesses asking for a level playing field, because the need for shared infrastructure at scale, kind of standardized infrastructure, is crucial.

In an individual company, it is a real challenge to build

out that infrastructure to establish sufficient collection points or access points for consumers. They are looking for policy intervention to really help bring folks together to collaborate to get the shared infrastructure at scale but they need to make it work economically. I think that is the big challenge we are hearing.

Senator Merkley. At scale it just gets a lot cheaper.

Ms. Meng. Absolutely.

Senator Merkley. Ms. Schmid, as we think about plastic bottles being reused, is there a consumer challenge? Consumers get very used, they want their oranges to look orange and their apples with no bruises. They are kind of used to that kind of perfect product on the shelf.

Do we find with reused plastic bottles that consumers go, why does this bottle have scratches on it? Are consumers accepting and are the manufacturers happy with the consumer response of reused plastic bottles?

Ms. Schmid. Thank you for the question.

Reusable packagings are going to rotate several times. That is something, from our own experience, we are seeing consumers really willing to accept. It is also in the hands of the manufacturer to design the right durable package that is meeting their consumer needs.

Then we have a whole industry that has very strong

experience in designing product and packaging that delights consumers on a daily basis. I am fully confident, based on the work we have seen already on the platform to date, we are able to deliver against those needs.

Senator Merkley. Let me ask you the same question I asked Ms. Meng. As you work on this project, what are the top three challenges you are encountering?

Ms. Schmid. I would say there is only one challenge. The challenge is scale. We talked about it previously in talking about labor costs. Costs will be viable once there are sufficient units to flow through the system.

What is required is really a system that is competitive versus single-use, also in the number of units that flow through the system.

Senator Merkley. Thank you.

Mr. Debus, I was picturing these plastic pallets. I am more familiar with wooden pallets. I am also familiar with how those wooden pallets break apart, degrade and so forth. Are the plastic pallets a more durable product? Is that part of why they have found acceptance?

Mr. Debus. They can be, for sure. Many of them are designed to last for many years and hundreds of uses. There could be some durability properties that plastic pallets offer that wood does not.

We are seeing some great advancements, though, in wood pallet suppliers performing reuse capabilities such as offering inventory management programs and working directly with customers on a managed pool of wood products and wood pallets. They can take back, repair and put them in place.

We are seeing some reuse models even get into the wood pallet industry as well. Several of our members are wood pallet supplier and pooler companies.

Senator Merkley. I have so many additional questions but I am out of time. I have another hearing that has just started. Our chair of Environment and Public Works has arrived. I am going to turn the hearing over to you. If you like, continue to go as long as you want.

So the hearing is yours. If you do not mind, I will leave.

Chairman Carper. [Presiding.] Do the Lord's work. When I finish my questions, should I gavel out?

Senator Merkley. Yes.

Chairman Carper. Ms. Meng, how are you?

Ms. Meng. Doing well, thank you.

Chairman Carper. It is nice to see you.

Sometimes we hear from critics of the circular economy movement that our reliance on plastic and other single-use items has become so ubiquitous that the only policy solution is to improve our ability to recycle these products.

While this is certainly one element of achieving circularity, it overlooks two of the most important tools in our toolbox. One of those is reduction and the other is reuse.

I believe that achieving circularity in our economy hinges upon our taking an all-of-the-above approach when addressing consumption and waste management practices. I am inspired by the role that reuse and refill infrastructure could play, can play in that transition.

My question for you, ma'am, would be why is it important to consider policy options beyond just recycling as we work to create circularity within our economy? The second half of my question is, can you share an example with us of a reuse policy that has been effective in reducing overall waste? Do you want me to repeat those questions?

Ms. Meng. No, I have notes, excellent questions, and I am glad to answer them.

On the question of why we need to be looking beyond recycling, we see that kind of recycling is inadequate, both in practice and in theory. There is not enough that we can do with recycling due to products that are not easy to recycle like flexible packaging, and actual systems in place that aren't meeting our needs with recycling. We have to look beyond recycling for solutions.

Frankly, some of the solutions outside of recycling are

more appropriate for different types of products, are more suited to the products. Looking upstream is what EMF thinks is critical to meeting the challenges we face.

When we think about looking upstream, we see the great opportunity that is there. We see if you replace 20 percent of plastic packaging with reusable packaging, it is a \$10 billion opportunity. If you replace 10 percent of the plastic packaging on the market, you can keep 50 percent of plastics out of the ocean annually.

So there is a huge opportunity both economically and environmentally. We need to be aware of all our options when thinking about tackling those challenges.

On your question about whether there are reuse policies that we can point to --

Senator Carper. And a good example or two, if you will, on reduction or reuse policy.

Ms. Meng. Reuse policy that is effective, we have a number of policies that are in the early stages that are really great on reuse that we are really excited about like reuse targets that we are seeing currently negotiated in the EU up and running in France in the near term.

But when we think about what we have seen proven time and time again, I think bottle bills are a classic example that we look to across the U.S. States that we have seen really do drive

return rates. If we are incorporating reuse into those systems, we are in a position to be getting packaging back to be reused very efficiently and effectively.

Senator Carper. Thank you.

Clemence, who are you named after?

Ms. Schmid. It is a French name.

Senator Carper. I thought so. Bienvenue, welcome.

Ms. Schmid, you mentioned in your testimony that the United Nations views reuse, and I think this is a quote, "the most scalable solution to reduce plastic waste at its sources."

How has Loop been able to partner with other businesses such as Walmart in order to promote reusable packaging? That is one question. A follow-up would be, how can the Federal Government work alongside the private sector companies to scale reuse and refill infrastructure and technology?

Ms. Schmid. Thank you, Senator Carper, for the questions.

Loop works with brand manufacturers and retailers to transition from a disposable system into a reusable system in the least disruptive way. It is really about handling for that supply chain the reverse logistic in a way that disrupts the existing and very efficient supply chain in the least possible way, working with, you named them, Walmart but also over 200 brand manufacturers including Proctor and Gamble and Nestle.

We are develop reusable packages that are being enjoyed by

consumers. Upon return, Loop is collecting them back, sorting, storing and cleaning them. We also reimburse the deposit.

Senator Carper. How do you collect them back?

Ms. Schmid. We collect back them from the store where they are being currently returned by consumers or any other location that has a Loop return point.

Senator Carper. Thank you.

Ms. Schmid. Do you want me to address the question on the economics?

Senator Carper. Please, if you would.

Ms. Schmid. What is really important in the Loop system is that the package is an asset to the brand manufacturer as opposed to the cost of goods sold. In making the package an asset, you enable the manufacturer to innovate and create a fundamentally better package and a better consumer experience.

This is what, as a brand manufacturer or producer, you are really striving to be able to delight consumers. That is what they are able to do much better on a reusable package than on a single-use package.

Senator Carper. Any idea where that idea came from? That is a very clever idea.

Ms. Schmid. The idea for a reusable package?

Senator Carper. Yes. Has that been around for a while?

Ms. Schmid. I don't think that is a new idea. I think we

call it the milkman.

[Laughter.]

Senator Carper. When I was in grade school, my colleagues and I were out on the playground playing. The other kids started talking about who they were named after. They asked who I was named after and I didn't know.

That night when I went home, at supper, I said to my dad, who am I named after? We don't have any Toms in our family. He said speak to the milkman. He said, son, you are named after the milkman. That was when we actually had milkmen. We had a milkman named Tom. We moved a lot then but we always had the same milkman, so who knows. I like milk, I know that.

Ms. Schmid. I will ask if our milkman was named Tom also.

[Laughter.]

Senator Carper. Clemence, I have another question if you do not mind, dealing with lessons learned. I often like to say in life we need to find out what works and do more of that. For recycling, we often look to our State or local initiatives that are successfully promoting circularity.

My home State of Delaware recently passed a law that would ban food establishments from using single-use, polystyrene containers and other plastic items like coffee stirrers. While we are still waiting for our Governor to sign this bill into law, I look forward to the lessons that we gain from this

Delaware law and similar legislation.

I also believe we can learn from the international community, from countries beyond our borders, including France, about successful reuse and refill policies.

My next question of you, Mademoiselle, is having worked to launch Loop globally across three continents, is that right, what lessons can we learn from the international community as well as from States and municipalities, when it comes to reusable or refillable products and infrastructure?

Ms. Schmid. Thank you for this very important question.

The first learning is there is a market demand for reuse. Consumers are ready and are already experiencing it in many sectors. So there is a need to scale and we see this across all the markets.

The second learning I would bring to the committee, as you rightly pointed out, is some countries have already taken the forefront of working policies together with the business in order to foster and propel reuse.

In my home country of France, which is clearly leading the way, and also in Europe, we have seen reuse targets and reuse mandates coming through legislation which have fostered the creation of the reverse infrastructure and we are seeing the market developing extremely fast.

So I would summarize in making sure this government passes

legislation to support reuse.

Senator Carper. Thank you.

Mr. Debus, what are some of the lessons learned from your work at the Reusable Packaging Association that might help us achieve a more circular economy? How can we encourage other industries to pursue policies like incorporating reusable shipping supplies which are both good for business and I think are good for the environment?

Mr. Debus. Very much so. Thank you.

The biggest lesson in seeing reusable systems in action is that they create tremendous opportunity and value within the supply chain infrastructures and the participating parties. There is a lot of discovery that takes place.

When you are incorporating a reusable packaging system, you have to know every step of the way where that package is being handled. That opens the eyes for a lot of businesses to see other improvement areas that can take place, whether it is in their shipping or the warehouse, whether it is in the stores and stocking merchandise for a point-of-sale.

There are a lot of opportunities that come up with reusable packaging that people discover and it becomes an "aha" moment of wait, if we can do this, then this leads to other benefits.

That is the biggest takeaway that I have seen, especially being in the field, that reuse breeds a level of performance

that companies don't turn away from once they establish that system. They don't go back to a single-use model because they are generating benefits throughout the whole system. They are saving money and providing a better experience for those handling the items. There is not a lot of turning back.

I think as far as cultivating reuse systems, as I mentioned earlier, it is an investment so how can policy help with investments for the return, the payback that takes place maybe a year or two down the line?

A lot of our companies are looking at the immediate reporting, second quarter and how do we achieve efficiencies today. Sometimes that investment in reuse can take a year or two for the payback or return. So anything now, whether tax breaks, or grants, or things that can help generate the financial investment in reuse models would be very valuable.

Senator Carper. One last question for Dacie Meng. I believe the reuse and refill infrastructure presents a promising alternative to single-use plastics. My guess is you do too.

In the Environmental Protection Agency's draft strategy to address plastic pollution, the agency describes how the Federal Government should use its power of acquisition and procurement to promote sustainable supply chains for materials that are used in Federal buildings.

Ms. Meng, do you believe that our Federal Government could

successfully implement reuse and refill infrastructure in some of our Federal buildings? What are some of the best examples of single-use products that could be replaced by reuse and refill infrastructure?

Ms. Meng. That is a wonderful question. Thank you. The EPA's Plastics Strategy is a really exciting development. I think this is a key piece of the work we need to be doing on reuse.

I will point you first to GSA which has an advisory committee that published a kind of road map exactly on this topic for different pilots than can be conducted both by procurement officers and facility-specific pilots.

But when we think about what are some of the actions the Federal Government can take and what products can be transitioned to reuse, the obvious ideas are drinking fountains as a replacement, building the infrastructure for reusable water or water bottles.

Then we can look to the food service areas such as cafeterias and other things that may be replaced with reusable food ware, if that is not already in place.

I will continue to think on that and get back to you with a few additional ideas.

Senator Carper. Good. You may have a chance to do that. We are going to be submitting questions to each of you from our

colleagues who are not here and some who are here. We call them questions for the record, or QFRs.

We will ask that Senators to submit the questions for the record through close of business on Thursday, August 10th. We will compile those questions and send them to you and ask you to reply to us by Thursday, August 24th.

In closing, let me thank you all. Merci beaucoup. I thank each of you for appearing today and your testimony, but really for what you do with your lives. I hope your work provides you with great satisfaction. Mine certainly does for me.

As a point of clarification, Senators will be allowed to submit questions for the record through the close of business on Thursday, August 10th. Again, we will ask you all to respond by Thursday, August 24th.

I do not know how they say this in French but we have a saying here that when something is over, we say, that is a wrap. We are grateful to all of you.

One of my favorite people, favorite leaders, if you will, from other countries is the leader of France. President and Mrs. Biden hosted a State Dinner for French President Macron about a year or two ago. I had the opportunity to chat with him a bit there.

He had spoken to a joint session of the Congress about two years ago. I got to shake hands with him and chat with him

briefly before he spoke. In his address that day to the joint session of Congress, he said these words, "This is the only planet we are going to have. There is no planet B. This is the only one."

I told him at the state dinner that I have quoted him many times in saying that. I have never given him credit for the quote. He said, "We have a special name in France for people like you who steal our material without attribution." We had a good laugh.

Keep up the good work. You are doing great things for our planet, the only one we are going to have. Take care.

With that, we are adjourned.

[Whereupon, at 10:51 a.m., the subcommittee was adjourned.]