

Lithuanian Deposit System - Environmental Champion in Eastern Europe

Gintaras Varnas, USAD

Hello, everyone. It's a great honor for me to be able to tell you about what we did in Lithuania. We are the last country to have launched a deposit system, and are lucky and happy that we managed to do so very successfully. We are proud of our results and are happy that we can use our success to show other countries that it is possible and help them learn from our experience. We have had visits from many countries, including many in Europe, Australia, China, India, Belarus, and many others.

This presentation is to explain a little bit how we did it and how our system is functioning and what the results are. First of all, let's talk about timing. Very often, people ask us how long it took to establish the deposit system. The legislation was approved in May 2014, and the system administrator was established in August of the same year. We then had a full year (2015) to prepare the system, and in February 2016 the system launched in full. When I say launched in full, I mean that all of the collection infrastructure at shops, including RVMs at retailers, was ready, as well as the counting centres. So, it took about 1 ½ years for Lithuania to launch the system once the decision to establish one was made by politicians, by Parliament, and after the legislation was approved.

As in most other countries with deposits, Lithuania's deposit system is not for profit and is run by industry. The system was established by three main industry associations: the Lithuanian Brewers Association (which represents approximately 60% of the volume of packaged beverages sold in Lithuania), the Association of Lithuania Retailers (very important to have on board; this association covers both big and small retailer chains), and the Lithuanian Natural Mineral Water Manufacturers Association. So, as you can see, the system is run by responsible industry players, including producers, importers, and retailers.

Now let's talk about the deposit system scope, what types of containers are included in Lithuania's deposit system. The system includes the following materials: PET, metal cans and glass bottles, both one-way and refillables, with a capacity between 0.1 liter and 3 liters. The beverage categories included are beer and other low-alcohol drinks as well as all non-alcoholic drinks, water, and juices, nectars, etc. When our politicians were deciding on what containers to include the deposit system, they looked at what countries were doing, with a particular focus on what our neighboring country Estonia did. We just copied what was included at the time in Estonia. We didn't want to reinvent the wheel. We wanted to implement something that we knew would work 100%. At the moment, our Environmental Ministry and Parliament are considering extending the system to strong alcohol, wine and spirits with glass. They have also considered extending the scope to Tetra Paks but, at the moment, we don't think that the RVM technology is 100% ready, but it's coming. Although Lithuania is a very small country with just 2.8 million people, we produce about 600 million beverage containers every year.

Now let's talk very quickly about the deposit system infrastructure. I mentioned that we have 2.8 million people in Lithuania; well, we have 2.7 thousand collection locations. Close to 1,000 of these collection points have RVMs installed and over 1,700 of them do manual collection. In total, approximately 90% of packages are collected by RVMs. All of this retail infrastructure took less than one year to set up.

The next slide explains how deposit system works. Basically, the consumer pays the retailer the price of the products plus the deposit for the packaging; the packaging company reimburses the deposit to the retailer; USAD counts the packaging and returns deposit to the retailer on the basis of the counted

packaging; and the consumer gets the deposit back when they return the empty packaging. The polluters, or those who choose not to return their bottles for recycling, partially finance the system. What are the producers roles? Producers have to mark deposit bottles in order to inform consumers that this bottle is included in the deposit system. Basically, once the decision is made to introduce deposits, producers have to update and/or add some logos to their labels and, of course, they have to charge the deposit. In Lithuania, the deposit has been set at 10 Euro cents. And as in all other countries that have mandatory deposits, the key producers and importers' responsibility is to finance the system. We often get asked how we set the deposit level to 10 Euro cents. The deposit level needs to be motivating enough for consumers to return bottles, but cannot be too low or else there is no financial motivation to participate in the system. It needs to be high enough to achieve high collection results, but, on the other hand, you don't want to set it too high because you want to minimize fraud. Sure, we could have set it at 1 euro per bottle, which would have maybe gotten us a little bit higher return rates, but then the risk of fraud is also higher. It's all about finding the right balance.

Now to talk about how the system is financed. At the moment, producers and importers are the main sponsors of Lithuania's deposit system. About 30% of the system's revenues come from sales of raw materials, 17% from unredeemed deposits, and 53% from producer fees. Our collection rate last year was 92%, so 8% stays in the system.

Retailer obligations. One of the key retailer obligations, of course, is take back and collect empty bottles from consumers and return their deposit.

The next slide is about system expenses. The majority (74%) of the deposit system expenses include retailers and RVM cost (such as compensating collection cost and expenses of using RVM). This is because our legislation, like that of many other countries, obliges producers and the deposit system to compensate retailers' handling costs. Logistics and materials costs represent about 12% of our expenses, and the remaining 14% is all for administration and operations (includes materials handling cost and our accounting centre, inspection, sorting and other preparation for recycling).

The next slide summarizes our collection and recycling results. As you can see, in 2015, before the deposit system was introduced, the recycling rate for PET bottles was below 33%. The remaining 66% was polluting our environment and it was not recycled. At this time, and for 10 years before that, containers were being collected and sorted in the "Green Dot system". In the first full year after the deposit system was launched, we collected 74% of containers. This doesn't mean that the remaining 26% was not being recycled. First year, it's always has, you know, effect of filling the market because you need to estimate what, what are stocks in the, at retailers, at consumers, at home, et cetera. We estimate that the real return rate was more than 90% even in the first year. In 2017, the second year of the system, we achieved 92% and this year we also will achieve a collection rate of 92% or a little higher. So the EU's new target of 90% collection by year 2025 or later, we are already achieving this now. In the first 3 years of operation, we collected 1.5 billion beverage containers, or 56,000 tons. This is equivalent to the weight of 6 Eiffel towers. I think that these volumes are impressive, especially since Lithuania is a really small country. I think it also needs to be mentioned that deposit systems not only achieve high collection rates and high volumes, but also very high quality materials. The material we receive in our system is very pure, not contaminated PET, cans, and glass. And when we sell it to recyclers we are getting much higher prices than what the previous Green Dot system operators were able to get for the materials. I can say that, for example, our glass factory, when they started to receive our glass, they told us that they had never in their history seen such high quality glass. As for cans, the biggest aluminum

recyclers in the world are competing for our aluminum and at the moment we're selling to the biggest aluminum recyclers in the world, Novelis. It is the same story with PET.

Now, what do consumers think? Believe me, the owners of the system care very much about the consumers. It's very important for retailers and producers that their consumers are satisfied with the system because if they consider it to be not convenient or more expensive, then they may shop elsewhere or not buy so much. To find out what consumers think about the system, we did several consumer surveys. One survey that was done by the Ministry before the system was introduced asked if consumers thought a deposit system was a good idea. Consumers answered that, yes, it's a good idea. But it's also important to ask consumers what they think about the system after it is running a year or two. So in a consumer survey conducted in 2018, we asked consumers many questions, including "Do you think it was the right decision to introduce this deposit system for Lithuania?" and 97% of consumers answered: "Yes, it was a really good decision." We also asked consumers: "How do you find the system: is it convenient for you, and do you know how to use it?" and 97% answered that they are satisfied with how the system is functioning. Sometimes some visitors or journalists ask us: "What is Lithuania's deposit system so successful? Why has it achieved such great results so quickly?" I think one of the big reasons why we've been so successful is that the system is convenient. If you want high collection results, the system needs to be convenient. To be convenient the system needs to be accessible to as many consumers as possible (lots of collection locations), and easy to use. Our consumers really like the RVMs. 90% of consumers surveyed admitted that the introduction of the deposit system has led to less littering of containers in the environment and that they no longer see bottles on the ground. Perhaps more importantly, 93% of consumers answered that the deposit system encouraged them to sort out all types of waste with more responsibility. This is important, because opponents of deposit systems sometimes say that if you introduce a deposit system, then consumers will not sort other packages. This shows that it's just not true. In Lithuania, consumers tell us that they are now more motivated to sort other packages.

Because very often people say that a deposit system is too expensive, we asked consumers very openly: "What you think?" 62% percent of consumers indicated that the price is not big, and that it's actually a good price to pay for such good results and for a clean environment. What surprised us more was that an additional 14% percent admitted that they'd be willing to pay an even higher deposit if the system could collect something else and do more good for the environment.

The next slide compares the number of packages put on the market to the number of packages collected before and after the deposit system was introduced. As you can see, before the deposit system, every year hundreds of millions of bottles were not being collected and were discarded or littered somewhere in the environment. Once deposits were introduced, this picture was reversed very quickly, in just one or two years. Today, the majority, 90%, are collected and recycled. Target achieved. Right now the European Commission is considering a target of 90% collection by 2025 or maybe even a bit later. But when they know that this target is possible to achieve in one or two years with a deposit system, it is questionable why they would even consider extending the target even longer. Perhaps the target should be set for 2022, I don't know.

Now let's talk about the impact on CO2 emissions. Since the start of its operation, Lithuania's deposit system has prevented the release of 152,400 tonnes of CO2 emissions. These savings are the result of many things, for example, reduced transportation emissions because the same trucks that deliver the product to the shops in Lithuania bring back the empty bottles to central warehouses. Our counting

centre is located on the same street as two biggest retail chain central warehouses, which means almost zero transportation emissions. Compare this to a Green Dot system where you need special, dedicated, very expensive and very fuel-consuming trucks for picking up containers from each consumer's house. Imagine how much fuel and CO2 emissions you are saving only on logistics. Then there are the savings that come from using less virgin material (emissions associated with production, etc.).

Now I will show you a short movie to give you a visual of how the system works in Lithuania. Tomorrow we will visit our counting centres and collection places. We have only one counting centre for all Lithuania, so all packages collected go through that centre.