



Increasing Competitiveness by Using Less Energy

Olteks and Lesya, two environmentally conscious apparel companies in Ukraine, know that reducing energy consumption does not have to mean lower production or product quality. When done smartly, energy efficiency can reduce production costs per unit without compromising a product's quality or the quantity produced. This is not only good for the environment, but can also increase a product's competitiveness, both domestically and globally.

Olteks and Lesya are progressive apparel enterprises with production facilities located in small provincial towns. They provide jobs to the local communities. The companies are both aware that clean production is important, both for workers' health and safety and for the quality of the local environment. Their experience exporting to the EU and now aiming at the Canadian market have

also taught them that resource and energy efficiency are critical to global competitiveness.

Both companies are seeking new ways to make their production cleaner. In 2018 and 2019, Olteks and Lesya conducted substantial renovations to update their manufacturing operations. One of their main goals was to achieve energy efficiency. However, with no special in-house expertise, they were unsure whether they were going in the right direction.

To assist them, CUTIS sponsored a team of experts to systematically assess their manufacturing performance. Since 2019, CUTIS has collaborated with the Kyiv-based Resource Efficient and Cleaner Production Center (RECPC, www.recpc.org) to offer partner companies professional advice on efficient resource and energy use and other cleaner production measures.

“The RECP assessment validated our efforts and provided evidence-based external expert advice to help us further optimize our resource and energy use. Without CUTIS’ help identifying experts who could analyze and present hard data on our resource and energy consumption, it is unlikely that we would have received this advice.”

— Sychenko Mykola, CEO, Lesya

The RECP assessments, conducted for Olteks and Lesya in March and July 2020 respectively, systematically analyzed and evaluated each company’s resource and energy consumption against industry best-practice benchmarks. Under-performing equipment and production practices were identified, as were ways to improve them, in order to provide clear direction for improvements.

The results revealed that Olteks and Lesya have taken appropriate measures to reduce their environmental footprints, in particular by procuring energy-efficient equipment. However, further improvements are still possible in the areas of water usage, lighting, heating, air conditioning, compressed-air systems, and waste management.

Based on the RECP recommendations, Olteks has taken measures to reduce water use and is planning to further save energy by alternating boiler use and installing a condensing device with automatic regulation of their electric substation. For their part, Lesya plans to adopt a partial steam heat recovery system and install heating unit weather-dependent regulation with riser-hydraulic balancing.

Adoption of the RECP recommendations will increase both companies’ resource and energy efficiency, reduce their carbon emissions, and lower production costs per unit. For example, by alternating boiler use (instead of using them all at the same time), Olteks can reduce its annual electricity costs by up to UAH48,000 (approximately C\$2,250). In turn, Lesya’s adoption of a partial steam heat recovery system could reduce their annual electricity use by up to 70,000 kWh and save the company UAH203,700 (approximately C\$9,700).



RECP recommended adjustments to Lesya’s heating and ventilation system to help conserve electricity.



RECP recommended Olteks alternate its boiler use to optimize gas consumption.

RECP's assessment exposed some legal challenges in adopting environmentally friendly waste management. Olteks was interested in repurposing its abundant fabric scraps and waste into by-products (e.g., mattress filler). Fabric waste can also be used for fuel, usually mixed with coal or wood. These actions would prevent the waste from going to landfills.

However, current Ukrainian customs legislation disincentivizes the repurposing of leftover fabric. Most Ukrainian apparel companies use a "give and take" system in which foreign buyers provide raw materials, receive the finished product, and take back any fabric waste. The Ukrainian companies are paid for providing manufacturing services. If these companies want to reuse or repurpose the fabric scraps, they have to pay import tax. This tax policy discourages apparel producers from utilizing and taking economic advantage of their waste fabric.

Iryna Zaitseva, head of the Pryluky Sewing Factory (part of Olteks), knows this is a challenge specific to the apparel industry. She is planning to bring this issue, with evidence from the

RECP assessment, to the Ukrainian Association of Enterprises of Textile and Leather Industry (UKRLEGPROM). The industry association is a good vehicle to bring the issue to the attention of legislators.

“RECP experts highlighted significant economic opportunities in converting textile waste into useful by-products or an additional energy source. Their cost-benefit calculations provided us with the evidence to raise this issue with UKRLEGPROM. There is an obvious need to update Ukrainian legislation so that economic and environmental benefits can be generated from fabric waste.”

—Iryna Zaitseva, Pryluky Sewing Factory

The CUTIS-sponsored RECP assessment has helped increase both Olteks' and Lesya's confidence in their environmentally friendly production systems, provided improvement plans to further optimize resource and energy consumption, and highlighted waste management opportunities and policy gaps that legislators should address. Resource efficiency and cleaner manufacturing processes are critical to sustainability and global competitiveness for these two companies.