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Russia Could Lead 3rd Industrial Revolution

By Eiso Vaandrager

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McKinsey, a U.S.-based global consulting company, estimates in a recent report titled "Towards the Circular Economy" that the European Union alone could save $400 billion a year by redesigning its production processes toward a wasteless or "circular economy."

A simple example illustrates this concept: A child building a car from Lego blocks would not think of throwing away the car once he no longer liked it. He would disassemble it and use the components to build a plane. If this principle were applied to the European Union, it could help boost its gross domestic product as much as 3 percent. The EU Commission and the EU parliament have thus made the strategy toward a circular economy a top priority.

For Russia, which currently consumes 10 times as much energy per unit of GDP than Germany, the impact could be even higher: up to a 15 percent increase in GDP by our estimates. Interestingly, because Russia has such outdated infrastructure, which needs to be replaced anyway, it could in fact be quicker on the uptake of a new "third industrial

revolution."

Just as Britain led the first industrial revolution, which was driven by steam power and the printing press, and the U.S. led the second industrial revolution, driven by petroleum, the telephone and television, Russia could become the leader in the third industrial revolution, which will be driven by smart energy, clean technology and the Internet.

At the same time, Russia could make a valuable contribution to help solve the global problem of resource scarcity. With 7 billion people on this planet, growth rates have slowly started decreasing, and total population is expected to plateau at 10 billion. It is clear that advanced and emerging economies need to find new ways to reuse resources. Thus, there is a growing interest in developing ways to create a circular economy, one without any waste. This is the only way we will be able to provide 10 billion people with goods and services to have a productive and good life.

The introduction of clean technologies in member countries of the Organization for Economic Cooperation and Development often takes a long time because countries lack of a sense of urgency and have a well-established, functioning infrastructure, while entrenched interests defend the carbon-based, centralized energy system.

In emerging markets, the situation is often different. Take, for example, Beijing, where electric scooters are the law. According to Pike Research, the market for electric two-wheelers — for example, e-scooters, e-motorcycles and e-bicycles — could reach a cumulative level of 355 million units by 2018 in China alone. The current Chinese five-year plan envisages investments into clean technology of $740 billion. China and Singapore will become global leaders in clean technology. Other markets such as Brazil, Russia, India and Kazakhstan are also starting to move forward.

Over the past 10 years, many investors have recognized clean-technology opportunities. They initially identified this sector as a new asset class, much like IT, and started to invest likewise.

But the fundamentals of clean-technology investing are completely different from traditional venture capital models used in IT. It is an irreversible, necessary trend, not another asset class.

In addition, many of the clean-technology propositions are already commercially attractive. Once investors see clean technology as a trend and part of the bigger movement toward a circular economy, their investment focus and evaluation of the opportunity will change. These investments will go to the places where they have the best market opportunities, and emerging markets are jockeying for first place, leapfrogging the OECD.

Eiso Vaandrager is principal at Europe Tatarstan Cleantech Fund, a Wermuth Asset Management fund.

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