How can Murata Power Solutions products help design engineers create more energy efficient products?

The efficiency of a power converter makes an important contribution to an electronic product's overall energy efficiency. When considering electronic components in the design of a product, it's likely that the power converter will present the most options for saving energy. Compared to other parts of the system, power supplies offer extra flexibility since many have industry standard sizes and pinouts. The designer has the option to increase the investment to buy a more efficient converter, and/or to replace the converter when more energy efficient versions of it become available.

As an example, Murata Power Solutions' recently released MEV3 series of single output isolated DC-DC converters is a new generation of products which is both significantly smaller and more efficient than previous versions. As we continue to innovate, our power converters become more efficient and therefore generate less heat, meaning they can have their package size reduced, run cooler, or a combination of both. The MEV3 power converter produces 3W from a package size that previously housed a 2W converter, and typically offers a 6% improvement over previous models. Future product launches from Murata Power Solutions will continue the trend of increasing efficiency and reducing package size.

A DC-DC power converter such as the MEV3 would be used at the end of a chain of power converter modules which convert different voltages to different parts of a system. There may be multiple power converters at all levels of this chain. It's a common misconception that a large system will consume a large amount of power, and any small efficiency saving by the power converter will not make a dent in the overall figure. Don't forget that any efficiency savings in a downstream converter, however small, will be multiplied by the number of converters in the system which can quickly add up to a significant saving.