Executive Summary

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Polymer processing is energy intensive. The manufacturing of components and the services can, in most instances, equate to over 90% of energy used by the average UK plastic processor.

This guidance document explores where operational value is being lost, how to implement key energy productivity measurements and improvements, and factor in fluctuating energy costs.

Implementing a robust energy management system creates the structure and oversight to better monitor energy consumption and improve efficiency. Aside from saving on energy use, the cumulative benefit of understanding your energy use can lead to significant industrial productivity gains.

Other advantages can include

- **quicker start-ups generating less material waste;**
- **reduced resource use and pollution;**
- **lower operational and maintenance costs;**
- **optimisation of machines to reduce cycle times;**
- **increased production capacity to manufacture more components.**

Combined, all these factors can increase value generation, and consequently improve a processors' productivity and competitiveness. Case studies featured in Sections 3 and 8 show the potential savings and reduced overheads.

Actions and the ensuing results will vary depending on each processors' respective operation.

By questioning **"Where do we use energy?", "What uses energy?", "When do we use energy?"** and **"How much energy do we use?"**, this guidance document can help incentivise and assist processors to:

- **Benchmark** their performance against energy values generated by a typical processing site
- In **4 hours** create a **personalised site** energy map
- **Analyse data** at set intervals to identify peak energy use
- Actively **save up to 30%** on energy costs
- Achieve **fast productivity payback**, typically between 3-6 months
- **Increase profits** while simultaneously reducing sustainability impact.