Introduction

“Energy consumption” is one of six product-based environmental indicators the aerospace, defence, security, and space (ADS) DfE Working Group is developing to help industry effectively evaluate and reduce their environmental impacts and business risks. Other metrics include access to resources, hazardous substance use, recyclability potential, waste production, and water consumption.

Definition

This position paper defines “energy consumption” as the amount of energy consumed during the life cycle of products within the ADS industries at selected stages, within defined boundaries.

ADS Industry Position

ADS firmly believes that:

1. Increasing demand for energy and the need to transition to a low carbon economy requires energy efficiency at each life cycle stage of a product to be a consideration in decision making
2. Due to the size, complexity and long-life cycles of products from ADS industries, the long term cost and impact of energy use is a major concern
3. We need a consistent and transparent method for measuring the life cycle energy demands of our products to help us identify risks and opportunities for energy and carbon efficiency decisions throughout the whole value chain
Environmental relevance

The consumption of energy has a range of both direct and indirect environmental impacts. For example, climate change, resource depletion, and damage to eco-systems. There is also a social responsibility to sustainably extract and consume energy in a manner that meets current and projected energy demands for society without damaging the environment.

Business relevance:

The manufacture and service of complex products are major activities of the ADS industries. Some of these products have both long life cycles and long production runs meaning energy use is therefore both a current and long-term future cost consideration. There is a need to safeguard business continuity from risks such as potential future energy costs, energy dependencies, and interruptions in energy supply. Additionally, there is a growing business requirement to account for and declare Green House Gas (GHG) emissions from energy use at the product-level.

A consistent approach towards measuring energy consumption at the product-level will enable the ADS industries to cost-effectively manage exposure to “energy risks” and to account for GHG emissions. Accurate and transparent accounting of energy use and GHG emissions also enables the industries to demonstrate its commitment to reduce impacts on the environment.

Legal and policy relevance:

Reducing energy consumption and switching to renewable energy sources are seen as key enablers for achieving energy security and operating a low carbon economy. A consistent and transparent approach within the ADS industries towards collating data for evaluating “energy consumption” at the product-level will support the development of effective policies for the benefit of the economy, society, and environment.
### About ADS and the Design for Environment working group

ADS is the premier trade association advancing the UK’s Aerospace, Defence, Security and Space industries. ADS comprises around 900 member companies across all four industries, with over 850 of these companies identified as Small and Medium Size Enterprises (SMEs). Together with its regional partners, ADS represents over 2,600 companies across the UK supply chain.

The Design for Environment group reports to the Environmental Working Group of ADS and its remit is to:

- be the industry reference platform regarding product sustainability;
- develop a standard in eco-design for the ADS industry; and
- ensure that eco-design adds value to our products and businesses.

Its objectives are to:

- Promote awareness on product sustainability / eco-design by sharing best practices,
- Strengthen the industry position on product sustainability / eco-design,
- Contribute to legislation-watch in the field of eco-design and related topics,
- Respond to consultation on behalf of the ADS industry sectors,
- Engage on eco-design with other industries,
- Develop a standard for the industry to ensure the deployment of eco-design in the ADS industry’s supply chain (methodology and metrics)
- Anticipate risks (Prevent material obsolescence and material supply disruption, be less fragile to price volatility, avoid potential risks due to non-conformance to legislations, etc.)
- Foresee opportunities (Be the first ADS industrial chain with eco-design considerations standardised and embodied in the products, processes and businesses.)