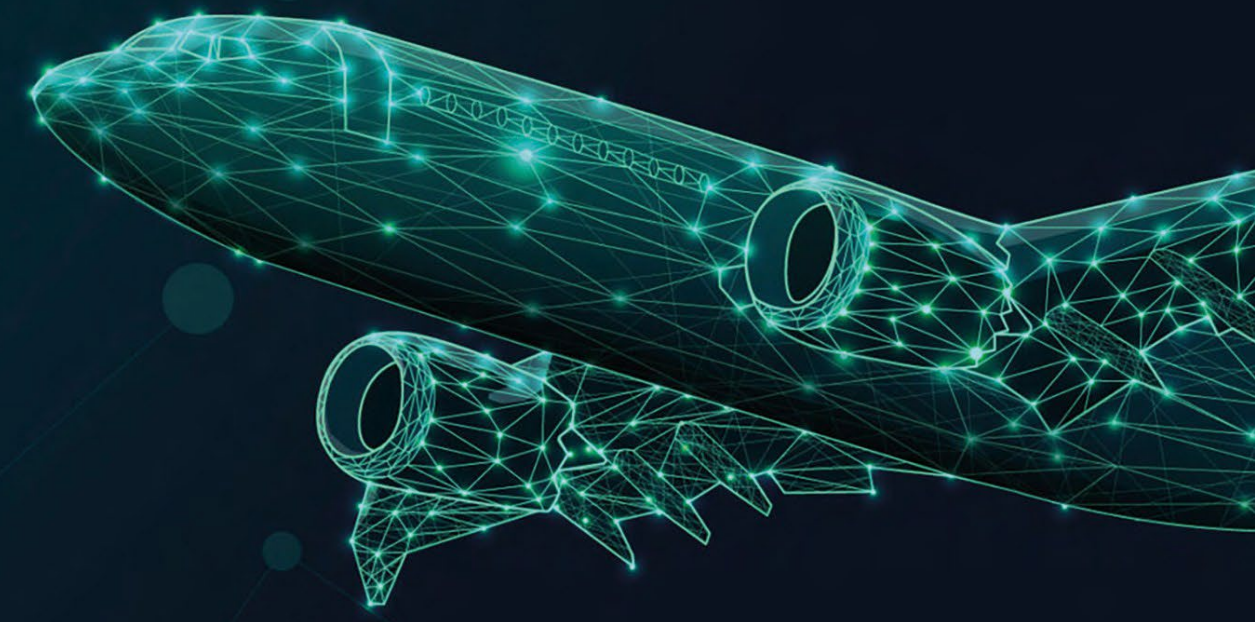


Sustainability Analysis: LCA: Data Collection



Ruadan Geraghty, Jon Taylor, Stuart Sykes

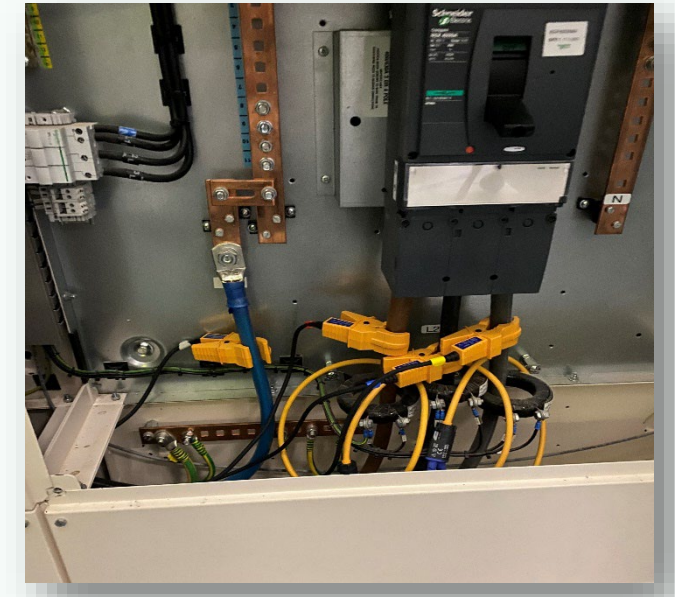
Data Quality

The accuracy of an LCA is underpinned by the quality of the available data. Current composite processing data is either not available, temporally or technological irrelevant, or lacking transparency.

Through D-STANDART, data collection on the demonstrator manufacture can be used to make versatile sustainability models; used to reduce environmental impact through design



NCC Demonstrator AFP Layup



Energy monitoring equipment

Data Capture

When undertaking data capture in manufacturing we consider all inputs and outputs:

- Materials
- Waste
- Consumables
- Energy Monitoring

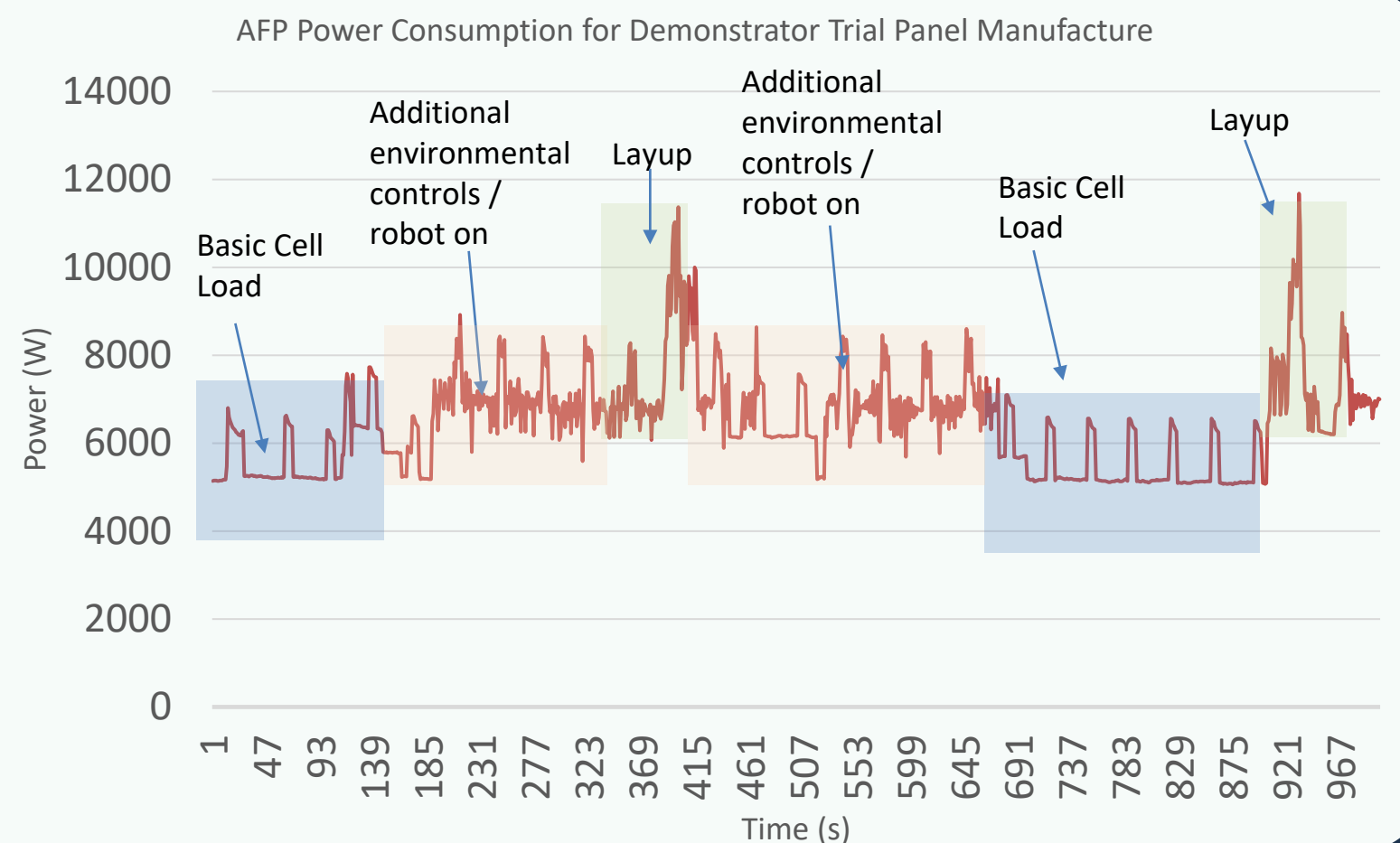
	Ply Cutter	AFP Layup	Autoclave Curing
Materials and Consumables data capture methods in place:	✓	✓	✓
Energy Monitoring Capability	✓	✓	Pending gas flow sensor installation
Process Has Been Energy Monitored	✓	✓	Electrical consumption only

Energy Monitoring

Energy is a major contributor to the manufacturing environmental impacts, and so accurate energy data is required to understand a manufacturing process.

Energy monitoring of the Automated Fibre Placement (AFP) process has allowed for insights into hotspots, that will feed into LCA:

- Basic Cell Load (lights, environmental control...) is the major contributor, and so standby/ down time should be minimised
- Variation of layup parameters will dictate energy use, and should be accounted for in LCA data models



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DISCOVER MORE

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