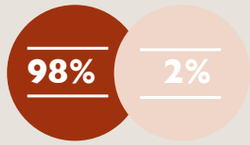
# Energy productivity in manufacturing

In a recent paper, **Jonathan Jutsen,** Chairman, Australian Alliance for Energy Productivity, highlighted how energy productivity (EP) is central to the total value created by the energy deployed.

Jutsen states that nearly **98%** of all energy we use in the process of production is wasted rather than being converted into useful services and products. '*When you boil an egg in a pot of water, for example, only* ***2%*** *of the energy consumed in the process actually goes to the boiling of the egg. And the situation roughly compares with what we see in other areas of usage*.'




He continues to point out that **EP** is the **total value created by the energy deployed, not just the increased energy efficiency of equipment utilised**.

'With this approach, we don't treat all these other savings as 'co-benefits' or 'non-energy benefits', which often exceed the energy savings (sometimes by an order of magnitude), but just as benefits.'

By using energy more productively businesses can make sure they are making the energy supply work for them. This means that when it comes to expansion that requires the use of more power, they can ensure that the extra power they are investing in can be used to its best advantage through streamlined EP.

In **manufacturing businesses**, for example, EP measures that could be introduced would include: **reducing energy bills**; **cutting maintenance costs**; **increasing reliability** and **maximising throughput**.

The key to EP is that it is an integrating concept, it captures total value. And Jutsen says as a result, it calls for integration of energy end-use policy with industry/urban/agriculture policy and planning.

'An EP approach encourages a focus on supply chains e.g. from farm through transport to the factory, through transport to distribution centre, through transport to retail, and through transport to the home. It is then possible to look across the supply chain for optimisation opportunities as well as to define where in the chain the greatest potential benefits lie, and focus effort there.'

A manufacturer for example would value an integrated service addressing its top business issues like automation and robotics (including the energy implications), optimal application of energy and resources to maximise total business productivity, improving plant reliability (including that of energy utilities and energy intensive plants), new process technology for their sector (including the energy productivity implications), and lean manufacturing (specifically incorporating energy performance).'