

A proposed Energy Hierarchy

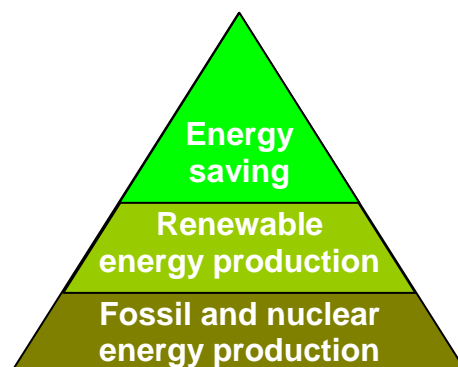
The energy sector is the world's largest industry. Yet it is diverse and complex with many impacts – economic, social and environmental.

Climate change, declining fossil resources, unstable prices and fuel poverty together demand a paradigm shift in energy provision. But we are still struggling with the means of achieving it. Even in Europe there are major divergences in national energy profiles and the degrees of market liberalisation.

This is a proposal to provide a context for evolving energy policy in the light of these complexities. It will help Governments, industry and the public at large to assess options in an area where there is no single 'silver bullet'.

The concept of a 'Waste Hierarchy' was very influential in advancing the debate about ways of controlling waste. A similar approach can inform energy policy and help the prioritisation of new solutions. This recognises that there is no one answer – we need to deploy a portfolio of many resources to achieve an affordable and sustainable way forward.

We propose an Energy Hierarchy similar to the established Waste Hierarchy. Again it would be ordered from the most to the least sustainable options. In its simplest form the Energy Hierarchy would look like this:



We can follow the waste hierarchy further by prioritising within each of the strata; for example usage reduction, conservation and efficiency under energy saving. Renewable heat might be the top option there as it delivers high carbon savings at low cost. Within the non-sustainable sources, there is a debate as to the relative merits of nuclear power. Its carbon footprint is superior to most fossil fuel sources¹, but it has other side effects, which may justify its relegation lower down the list.

In practice the needs of energy security support diversity of supply sources, in which case a more parallel approach could be adopted within each layer of the hierarchy.

The approach also lends itself to straightforward presentation to the public.

Where the waste hierarchy is simplified to:

Reduce
Reuse
Recycle

The Energy Hierarchy can be summarised as:

Reduce
Renew
Recover

¹ though it can clearly not be classified as renewable, as recently postulated by Lord Sainsbury!