



# Six Common Energy Mistakes



Reducing costs and carbon for business

## Energy - The business needs

There are three business drivers.....

**Cash**

**Kilowatts**

**Carbon**

ALL energy change drivers fall into these areas.

## Energy – The risk areas

For a true Energy Solution.....

<b>Plant Availability</b>	<b>Conversion Efficiency</b>
<b>Energy Demand Reduction</b>	<b>Operations &amp; Maintenance</b>

All four risks must be addressed

## Energy – The energy opportunity path

There are four identifiable stages in the energy path.....



All of these areas need to be addressed technically  
.....and commercially.

## Energy - The delivery routes

There are three things suppliers can deliver.....

**SERVICES**

**PROJECTS**

**SOLUTIONS**

All outcomes require one of these deliveries.

# Energy – The ESCo delivery options

## ■ Energy Services

- Audits, Operations & Maintenance, Measurement & Verification, Monitoring & Reporting, Energy Supply, Energy Procurement, Invoice Validation, Billing, Regulatory Compliance, Energy Reporting

## ■ Energy Projects (Client or Consultant IP)

- Connections, Metering, AMR, Plant Re-Fits, Plant Replacements, Upgrades, BEMS, New Builds

## ■ Energy Solutions (Power Efficiency IP)

- Energy Funded Asset Replacement, Energy Performance Contract, New Builds

## The six key energy mistakes

- Not bundling solutions
- Not thinking laterally
- Buying something just because it says it's 'eco friendly'
- Forgetting it's the building that delivers sustainability, not the energy-using elements
- Confusing sustainability with short-term cost or energy saving
- Forgetting to 'recover' at the end of the energy path.

## 1. Not bundling solutions

- Do not focus too much on 'Quick Wins' ( 'low hanging fruit' )
- Money generated from 'quick wins' is not a windfall saving
- 'Quick Wins' money is an opportunity to fund the real challenges of reducing carbon dependency
- If 'Quick Wins' are combined with longer return projects, they can meet financial goals as a combined solution yet exceed the total delivery of quicker financial return projects.



## 2. Not thinking laterally

- It is important to know where you are – Quality Audit
- All energy must take the same path.....
- Supply → Convert → Consume → Recover
- Understanding these four stages for your business and look at them imaginatively – remember .....solutions not technologies!
- This knowledge informs you of the potential to make changes.

### 3. Buying kit just because it's 'eco friendly'

- Buying energy-saving kit is laudable, but only part of the picture
- Will the technology compliment or be counter productive
- Remember, efficiency is the relationship between what you get out and what you put in
- Everything else is just someone's opinion
- Almost all energy-saving devices will work as well as expected, but only in isolation (they eat the same lunch!) – WILL IT INTEGRATE ?
- Voltage Optimisation – great, but in what context?

## 4. Forgetting it's the building that delivers sustainability

- The cheapest energy is the energy you don't use
- Why change the lights when you can look to use natural light?
- Why change the HVAC when you can use insulation to keep the heat in and open windows for cooling?
- Always consider all of the alternatives to a problem
- Do not buy products – acquire solutions to your problems
- Limited knowledge can be risky and expensive
- Understand your building

## 5. Confusing sustainability with cost saving

- A bus station that pays waste contractors to take away energy !
- Chocolate producers selling energy as pig food !
- Understand what you need
- Understand how you can achieve your needs
- Integration is more important than technology in delivering sustainability.

## 6. Forgetting the 'recover' end of the energy path

- Do not throw it away until you have finished with it !
- Heating and cooling leaking out of a building is lost forever
- It's looking at the 'recover' end of the energy path that helps make a building sustainable
- Look at potential energy transfer, it is key to sustainability.

## What are your options?

- Make the best efforts you can on your own (great if you have the knowledge and technical expertise)
- Buy gadgets which you hope will work (but remember the big picture, integration is key)
- Work with expert contractors and consultants to help you with the process (have you got the right partners and do they see the big picture?)
- Engage with an ESCo (integrated and an 'end to end' risk-transferred solution)

## What is an Energy Performance Contract ? (EPC)

- An ENERGY PERFORMANCE CONTRACT (EPC) is an integrated SOLUTION delivered through a combination of projects and services designed, developed, installed and operated to deliver a specific ongoing output which is both technically and commercially underwritten by the solution provider
- The provider of such solutions to market is termed an ENERGY SOLUTIONS COMPANY or ESCo.



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