RENEWABLE & SUSTAINABLE ENERGY

BSD Energy and Low Carbon Strategy

Background

The 'Renewables Toolkit' document was published by the London Energy Partnership in September 2004, and is the accepted guidance on the integration of renewable energy into new developments for planners, developers and consultants.

The toolkit defines an 'Energy Hierarchy' to help guide decisions about which energy saving measures are appropriate in particular circumstances. When each stage of the hierarchy is applied in turn to an activity, it is ensured that the development's energy needs are met in the most efficient way.

The stages are: -

1. Be Lean (Use less energy)
2. Be Mean (Select the most efficient plant)
3. Be Green (Use renewable energy)
4. Be Clean (Supply energy efficiently)

To these, a fifth stage can be added.

5. Be Realistic (Proposals must be affordable, effective and easy to live with)

It is therefore important for energy efficiency as well as renewable energy to be considered for each new development. This means that buildings will use less energy and therefore need to use a smaller amount of renewable energy (if appropriate) to supply the same proportion of the development's needs.

The BSD Strategy

BSD are at the forefront of developing and implementing Low Carbon Energy Projects.

The main objective of the energy strategy should be to reduce the CO_2 emissions from the proposed development by following the principles set out below. The energy strategy should also aim to reduce the use of finite, non-renewable resources (fossil fuels).

The principles for developing a BSD energy strategy are:

- Reduce demand
- Meet end use demand efficiently
- Supply from low carbon sources
- Supply from renewable sources
- Enable energy management
- Encourage passive design measures
- Encourage the use of daylighting
- Attempt to influence building orientation
- Attempt to influence building shelter and shade
- Encourage the use of natural and mechanical ventilation

Examples of energy supplied by low and zero carbon (LZC) technologies

- Gas-fired combined heat & power (CHP) and tri-generation
- Solar hot water heating and solar air collectors
- Wind turbines
- Photovoltaics
- Biomass heating and combined heat & power (CHP)
- Ground source heating and cooling

Water management strategy

The principles underlying a water strategy are:

- Reduce demand (and waste)
- Meet demand efficiently
- Supply collected rainwater or recycled grey water
- Recycle black water close to the point of use, if appropriate
- Enable water management
- Rainwater collection
- Grey water recycling
- Black water treatment