

Public perceptions of bioenergy

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Case 1

- 23 MWe biomass CHP plant (heat for fuel drying)
- CFB gasifier in combined cycle mode
- Wet solvent scrubber & ESP prior to GT
- Ash for off-site disposal
- Willow, miscanthus, forestry residues, waste wood and plant biomass
- Fuel chipped (5-10mm) and dried

Case 1 - Size/location

- Disused airfield site in rural area
- 600m from nearest dwellings
- 1.8 ha open air storage
- Fuel reception: 36m x 36m x 15m high
- Gasifier: 12m x 9m x 30m high
- Hybrid cooling tower
- 39m high stack

Case 2

- 2.5 MW biomass (miscanthus) power plant
- Year-round base load operation
- On-site bale shredding
- Combustion and steam turbine
- Underground cables for electricity export

Case 2 - Sizing

- Main building: 57m x 54 m
- Roof height 11-12m
- Chimney flue 12m high
- Cooling fans 9m x 12m x 11m high

Case 2 - Local impact

- Greenfield rural site
- Local farms (up to 60) to supply miscanthus; clean wood in interim
- Employment opportunities at site
- Ash returned as soil conditioner
- Location: open countryside, next to river; village 1.5 km away (3 dwellings closer)

Case 1 Thermalnet group

Case 1 - Local community concerns

- Lorry traffic congestion (93%)
- Lorry air pollution (86%)
- Credibility of developer (85%)
- Plant air pollution (85%)
- Plant appearance (83%)
- Odour (82%)
- Wastes as fuel (82%)
- Technological reliability (79%)

Case 1 - Local community concerns (2)

- Decrease in house prices (70%)
- Energy crops landscape impact (69%)
- Tourism impacts (68%)
- Plant noise (64%)
- Environmental impact (60%)
- Industrial precedents (57%)
- Light pollution (56%)
- SRC damage (archaeology) (46%)

Case 2: Thermalnet group

Case 2 - Objections (1)

- Visual intrusion
- Loss of agricultural land
- Noise levels
- Loss of property value
- Light pollution
- Construction & goods traffic
- Pollution and dioxins
- Fuel not appropriate
- No examples of working plants – doomed to fail

Case 2 - Objections (2)

- Will not benefit local people
- Fuel not clean and renewable
- No guarantee fuel supply will be local
- Will not reduce greenhouse gas emissions
- Profligate use of energy
- Construction energy & emissions outweigh benefits
- Can't safeguard pollution levels without continuous fuel monitoring