Comparison of Technology

First Power Limited

Question

Which would you choose?

Allington Energy recovery plant (incineration)

500,000 tons of residual waste from all over Kent delivered to fuel transfer stations and then taken by truck to the mass incinerator

Latest Lurgi fluidized-bed technology, the leading-edge technology of this type, that is WID compliant

Generates some **34MW** net power supplied to the grid

Total investment in the plant over £150,000,000 **(£4,400,000/MW)**

Deliveries by almost 300 trucks per day with an estimated round trip of 35 miles (10,000 truck miles per day)

50 jobs created

84 acres of of land use

80m tall chimney required

Bottom ash has dolomite added and is recycled

Fly ash has lime and activated carbon added to clean up the chimney emissions

Expected emissions are as follows: dioxins - 0.05 ng/Nm3 (limit is1.0); SO2 - 15 mg/Nm3 (limit is 300); NOx - 325 mg/Nm3 (limit is 350); and CO - 4 mg/Nm3 (limits 100). HCl, HF and heavy metal particulates are all well below established limits

Stein Pyrolysis Unit in combined cycle for same fuel

Six plants located next to fuel transfer stations

Pyrolisis gasification **(no chlorines or dioxins generated).** Also WID compliant but without expensive abatement requirements

Each plant will generate 9MW totalling **54MW** for the grid

Total investment for all six plants is 6 x £20,000,000 = £120,000,000 **(£2.2m/MW)**

No truck movements as the plants are at the fuel transfer sites

120 jobs created

Each plant will require approximately **2.5** acres i.e. 15 acres of land use

Plants require 4 x **15m tall** chimneys

No back end cleaning required

Fewer chemicals required giving lower operating costs per MW

Expected emissions are as follows: dioxins - nil (limit is 1.0); SO2 - 15 mg/Nm3 (limit is 300); NOx- 345 mg/Nm3 (limit is 350) and CO - 80 mg/Nm3 (limits 100); and almost no HCl, HF or heavy metal particulates

Answer

The one that: is twice as efficient; has lower capital cost; is cheaper to run; is better for the environment; has no truck deliveries; has no truck emissions, fuel consumption or traffic congestion.

2 Turnberry Quay, London E14 9RD T 020 7363 8888 F 020 7363 0332 info@firstpowerlimited.eu www.firstpowerlimited.eu