

BIOMASS POWER GENERATION

Capabilities and Services available

McLellan and Partners Ltd (McLellan) is an independent consultancy, which has been operating for over 80 years. The Company is organised and equipped to provide comprehensive consultancy, engineering, and project management services. Projects are undertaken in a wide range of industrial, infrastructure and energy sectors.



McLellan provides a comprehensive range of services worldwide, having completed projects in some 45 countries and currently working in more than a dozen. McLellan is

acknowledged for providing quality professional design, project management and consultancy services to project promoters, operators and financing institutions, in both the public and private sectors.

The range of services provided by McLellan includes expertise and support for biomass fired power generation and cogeneration;

- Power generation from waste wood, and other agricultural waste materials
- Power generation from chicken litter, and similar farming bi-products
- Biogas from anaerobic and bio-digesters
- Refuse derived fuels
- Coal mine methane

The services available from McLellan include:

Site Review and Feasibility Studies: Investigating the feasibility of using biomass for power generation or cogeneration, including assessing the quality of the biomass fuel available.

Project Evaluation: Financial modelling to determine whether an investment opportunity will provide the returns required.

Technical Solutions: Identifying the technical options available and finding the most suitable solution required to meet all investment parameters.

Engineering: Preparing the design and specification, obtaining tenders, equipment procurement.

Risk Assessment and Management: Clarifying project risks, identifying actions to mitigate risks, and managing such risks to turn them into actions or opportunities.



Contract Negotiation: Supporting client companies with technical input during the negotiation of fuel supply agreements, energy sales contracts, development agreements, construction and service contracts, and other contracts required to complete project development.

Project Investment and Financing: Assisting clients to select co-investors and lenders, providing information required to support the negotiation of lending agreements

Construction Management: Negotiation of equipment supply and construction contracts and management of the supply and construction process through to plant commissioning.

Owners Engineer: Supervision of the construction contractors to ensure that the objectives of the owners are satisfied, and that all third party interfaces are correctly managed.

Putting plant into Commercial Operation: Plant commissioning services, advising on the recruitment of operations staff, negotiating operations contracts and supporting the start up of commercial operation.

Project Development: All of these services can be combined into a complete project development service on behalf of development companies or investors. Managing the project development process through all stages from initial project identification, through contract negotiations and execution. We can provide a full engineering and consultancy service to achieve the successful start up of commercial operation.

Some examples of McLellan recent work on biomass projects includes:

- Owners Engineer for a chicken litter fired power plant in Scotland
- Technical experts report as part of a large multinational biodiesel development project
- Feasibility study for a cogeneration plant using waste wood at a sawmill in Latvia
- Study and options analysis for integrating a biomass fired power plant into a large CCGT facility
- Technical experts report for 5 MWe and 65 MWe biomass plants
- Consultant for an 8 MW short rotation coppiced willow gasification combined cycle power plant
- Study for a 2.5 MWth biomass fired boiler for a University.



These services are provided by McLellan working with partners and associates when appropriate to provide specialist skills and local market knowledge.

Please contact David Linsell on the numbers below to discuss your requirements:

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