

## CURRICULUM VITAE

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## EMPLOYMENT HISTORY

### Collex-Onyx, Queensland, Australia, Jan 2006 – Present CONSULTANT

Collex-Onyx is one of Australia's leading environmental services companies providing services in the fields of waste management and industrial services.

- Currently providing technical expertise to Collex-Onyx on the development and energy output for a major landfill site in Brisbane Australia including:
  - Gas modelling
  - Gas collection system design
  - Gas handling system design
  - Power generation facility design

### Waste Recycling Group, England, United Kingdom, Mar 2003 – Nov 2005 DIRECTOR OF OPERATIONS - WASTE TO ENERGY

Waste Recycling Group is the leading waste management and energy recovery company in the United Kingdom and is one of the largest producers of renewable energy in Europe

- Was responsible for the operations of 185 megawatts of landfill gas powered electrical generation including:
  - Meeting set performance standards and budgetary targets
  - Meeting safety, environmental and operational compliance of all facilities
  - Implementing appropriate action to meet set standards, targets and compliance
  - Developing and implementing efficient and responsive maintenance service programs for all facilities
  - Ensuring operations personnel are adequately skilled and trained to the level necessary to meet Company requirements

- Providing an interface between daily operations and corporate strategy
- Reporting performance standards to Board of Directors and executive members of Waste Recycling Group
- Managing a multi disciplined operations team of 115

**Novera Energy, England, United Kingdom, Jan 2002 - Jan 2003**  
**GENERAL MANAGER OF LANDFILL GAS POWER GENERATION**

Novera Energy is an international renewable energy company, developing and owning renewable and low emission electricity generators, suppling mainstream power grids and is one of Europe's largest renewable energy producers

- Managed the daily operations of 46 megawatts of landfill gas powered electrical generation for Novera's European division
- Directed the implementation of technologies and processes to Novera's landfill gas powered electrical generation facilities necessary to align operating facilities with corporate growth strategy
- Paramount in the re-organization of acquired power generation assets to optimize corporate growth strategy and profits
- Restructured Novera's Manpower Operating Model

**Novera Energy, England, United Kingdom, May 2001 - Dec 2001**  
**CONSTRUCTION AND OPERATIONS MANAGER**

- Provided key technical and operational expertise in the successful strategic acquisition of 13 operating and 3 proposed landfill gas power generation assets by Novera Energy including:
  - Managing the daily operations of 46 megawatts of landfill gas powered electrical generation for Novera's European division
  - Directing the technical due diligence team in evaluating equipment condition, maintenance provisions, maintenance records, gas production and power export records
  - Verifying waste-in-place and waste input records and effectiveness of gas capture arrangements
  - Preparing asset valuations and future development costing, current and future operating costs and manpower charts

**Energy Developments Limited, Queensland, Australia, Nov 1999 - Apr 2001**  
**MANAGER CONSTRUCTION SERVICES - SWERF PROJECT**

Energy Developments is an integrated energy company which develops, owns and operates power generation, cogeneration and waste-to-energy projects. Energy Developments operates an international portfolio of projects exceeding 420 megawatts

- Responsible for managing the construction of a \$100 million Solid Waste to Energy and Recycling Facility (SWERF)

- Provided key input in design process during construction phase
- Met construction milestones and completion deadlines
- Expertise allowed innovative approaches for the construction of SWERF technology
- Directed and lead a construction team of 85

**Alstom Energy, Australia, Jul 1998 - Oct 1999**  
**CONSTRUCTION MANAGER**

ALSTOM is the global specialist in energy and transport infrastructure. The company serves the energy market through its activities in the fields of power generation, transmission and distribution, conversion and the transport market through its activities in rail and marine

- Managed the Installation of two LM6000 45 megawatt gas turbine generators
- Managed the construction of a 60 megawatt combined cycle power station extension
- Managed a construction crew of 160
- Managed the construction of:
  - gas and liquid fuel systems
  - Demin, cooling water and cooling towers
  - HRSG installations
  - steam and water piping
  - electrical and instrumentation installations
  - 20 megawatt steam turbine facility

**CS Energy, Australia, Apr 1998 - Jun 1998**

**CONSTRUCTION MANAGER**

CS Energy Ltd is a Queensland Government owned electricity generator with the capability to supply 30 percent of Queensland's energy requirements. CS Energy uses a diverse mix of fuels with almost 3,000 megawatts of generation

- Managed the dismantling of one Frame 6 Gas Turbine in Berlin, Germany in preparation for its relocation to Queensland Australia
- Supervised a crew of 120
- Responsible for timely reporting of progress, site conditions, damage during dismantling, variations from scope and preservation and security for transportation

**U.S. Filters, Australia, Nov 1997 - Mar 1998**

**CONSTRUCTION CONTACTOR**

- As owner of Renfrew Engineering, supplied labour, materials and equipment for the mechanical and electrical installations of water treatment plants for Siemens/Transfield and Oakey Power Stations

**Energy Developments Limited, Australia, Oct 1996 - Oct 1997**

**CONSTRUCTION/PROJECT MANAGER**

- Completed bid documentation for various Australian and international power projects
- Oversaw all aspects of the construction phase for all projects nationally and internationally
- Managed a construction team of 55
- **Projects completed:**
  - **Cannington Mine Site - Power Station**
    - All aspects of construction management from time of taking possession of bare site to final commissioning of first four generators
  - **N.T. Power Project - Pine Creek Power Station**
    - Recommissioned redundant power plant comprising of three 2.8 megawatt Centaur gas turbines
    - Replaced gas skid, gas mains and HV mains, HV switchboard upgrade, SCADA installation and installation of VFD starts.
  - **Cosmo Power Station**
    - Recommissioned redundant power plant comprising of three 2.8 megawatt Centaur gas turbines including gas skid modification, new HV mains, 11/66 kV substation modifications, HV switchboard upgrade and SCADA installation
  - **Union Reef Substation**
    - Installed and commissioned 12.5 megawatt 66/11 kV transformer, HV switchboard and SCADA panel control modifications.

**A.G.L. - N.T. Gas, Australia, May 1996 - Oct 1996**

**PROJECT SUPERINTENDENT**

A.G.L. is a major participant in the Australian energy industry. A.G.L. is a major retailer of gas and electricity with an extensive portfolio of wholly and partly-owned investments in energy infrastructure, infrastructure management and other energy companies

- Responsible for the construction of one Saturn 10 Gas Turbine Compressor and Gas Plant on Alice Springs to Darwin Gas Main including:
  - Supervising contractors to ensure work carried out in accordance with the principles construction specification and in accordance with the contractors approved quality procedures.



- Reporting progress of work on a weekly basis
- Recording all data, inspection records, marking up as built drawings and all correspondence relating to construction and commissioning of the compressor station
- Ensuring N.T. Gases safety manual, safety procedures and contractor's safety procedures were adhered to at all times by the contractors
- Verifying all bills of quantities claimed by the contractors
- Ensuring N.T. Gases environmental procedures were adhered to at all times
- Giving all necessary instructions and directions to the contractors in writing with respect to contract specification

**Energy Developments, Australia, May 1993 - Apr 1996**

**CONSTRUCTION MANAGER**

- Responsible for all cost and equipment estimating and project development preparation for all power generation projects
- Co-ordinated the engineering, planning, procurement, labour and plant resources for all power generation projects
- Managed the construction of all power generation projects from inception to final commissioning
- **Projects completed:**
  - 6 megawatt landfill gas power station including landfill gas collection system, Broadmeadows, Victoria, Australia
  - 5 megawatt landfill gas power station, Lucas Heights, New South Wales, Australia
  - 2 megawatt coal seam gas generator, test Units including gas drainage delivery system, Appin Colliery, New South Wales, Australia
  - 10 kilometre landfill gas main treatment plant, Whittlesea, Broadmeadows, Victoria, Australia
  - 20 megawatt gas/diesel turbine power station at McArthur River Mine, Northern Territory, Australia. Directed all aspects of site construction from time of taking possession of the bare site through to final commissioning. (Renfrew Engineering supplied site management, supervision and the construction labour force)
  - 28 megawatt combined cycle gas/steam turbine power station at Pine Creek, Northern Territory, Australia. Directed all aspects of site construction from time of taking possession of the bare site through to final commissioning. (Renfrew Engineering supplied site management, supervision and the construction labour force)

**Baknorton Cement, Manila, Philippines, Sept 1992 - Apr 1993**

**RENFREW ENGINEERING CONTRACT**

- Interviewed and hired Australian electrical and mechanical tradesmen on behalf of Baknorton Cement
- Supervised all refurbishment work completed at Baknorton Cement power plants in the Philippines
- Managed the generation installation phase for all Baknorton Cement power plants in the Philippines

**Energy Developments (Construction) LTD, Australia, Jan 1991 - Aug 1992**

**MANAGER**

- Responsibilities included tender preparation, procurement, labour and equipment sourcing, site supervision during construction phase, development and installation of landfill gas gathering systems and monthly reporting
- **Projects completed:**
  - **BHP Browns Creek Mine, New South Wales**
    - Ball mill refurbishment, pump installations, conveyor re-treading, pipework and structural steel erection
  - **Energy Developments Limited, Lucas Heights, New South Wales**
    - Installation of gas gathering system, treatment plant and flare
  - **Energy Developments Limited, Berwick, Victoria**
    - Installation of an 8 megawatt landfill gas power station, gas gathering system and gas treatment plant
  - **Energy Developments Limited, Corio, Victoria**
    - Installation of a 1 megawatt landfill gas power station, gas gathering system and gas treatment plant

**Renfrew Engineering PTY LTD, Australia, Jul 1984 – Dec 1990**

**OWNER MANAGER**

- Renfrew Engineering was established up to undertake mine site, power generator and power distribution construction work. The Company also carried out procurement and refurbishment of mining equipment including crushers, ball mills, conveyors, generators etc.
- Work was completed on the following projects:
  - Tanami Gold Mine, Northern Territory, Australia - Kinhill
  - Mount Bonnie Gold Mine, Northern Territory, Australia - BHP Engineering
  - Woodcutters Mine, Northern Territory, Australia - Nicron Resources
  - Tom's Gully Gold Mine, Northern Territory, Australia - BHP Engineering
  - Highway Gold Mine, Queensland, Australia - Pacific Gold
  - Pine Creek Gold Mine, Northern Territory, Australia - Renison Goldfields

- Cosmo Howley Mine, Northern Territory, Australia - Dominion Gold
- Disraeli Mine, Queensland, Australia - N.Q.R.
- Goodall Gold Mine, Northern Territory, Australia - Western Mining
- Cosmo Howley Gas Turbine Power Station, Northern Territory, Australia - Solar Turbines
- Katherine Gas Turbine Power Station, Northern Territory, Australia - PAWA
- Pine Creek, Moline, Goodall and Cosmo Howley Sub Stations, Northern Territory, Australia - PAWA
- Construction Management of the 66KV Goodall Transmission Line, Northern Territory, Australia - Energy Developments

**ELMEC PTY LTD, Australia, Mar 1977 - Jul 1984**  
**OWNER MANAGER**

- ELMEC took electrical and mechanical projects from the initial enquiry through to commissioning and final project hand-over including estimating, programming and contract control. ELMEC was a medium sized electrical and mechanical contracting company employing between 25 and 80 people

**Balfour Kilpatrick/Kilpatrick Green, Sept 1964 - Feb 1977**  
**VARIOUS POSITIONS HELD**

- Commenced work as indentured apprentice in Paisley, Scotland
- Progressed through various levels of responsibility, management and experience
- Experience gained and progress within the Kilpatrick Group included:
  - Apprentice Electrician, Paisley, Scotland, United Kingdom
  - Junior Switchboard Draftsman, Paisley, Scotland, United Kingdom
  - Junior Construction Estimator, Paisley, Scotland, United Kingdom
  - Design Draftsman, Paisley, Scotland, United Kingdom
  - Construction Estimator, Paisley, Scotland, United Kingdom
  - Senior Estimator Overseas Projects, London, England, United Kingdom
  - Estimating Manager West Africa, Lagos, Nigeria, Africa
  - Construction Supervisor, Lagos, Nigeria, Africa
  - Contracts Manager, Lagos, Nigeria, Africa
  - Commercial Manager, London, England, United Kingdom
  - Construction Manager, Groote Eylandt, Northern Territory, Australia