



Infratil

**Shareholding Acquisition In
Energy Developments Limited (EDL)**

July 2002



Context of Transaction

- EDL is a listed Australian company, active in renewable energy
- NRG has been a cornerstone shareholder in EDL
- Other shareholders are diverse Australian institutions
- NRG has announced intention to withdraw from Asia/Pacific region
 - Part of an aggressive plan to improve its balance sheet
- Completion of transaction resulted in:
 - NRG completely exiting its EDL shareholding
 - Infratil holding 9.99% of EDL's ordinary shares
 - Orion simultaneously reaching similar position
 - Orion is an independent investor
- Infratil and Orion will each nominate one director
 - Replacing the two NRG nominated directors





Transaction Components

- NRG's ordinary shares
 - 7.3m sold to Infratil at \$3.30/share
- NRG's preference shares
 - Bought back by EDL at \$1.80/share
- Placement of EDL ordinary shares
 - 4.2m purchased by Infratil at \$4.13/share
- Average purchase price of \$3.60 for Infratil's 11.5m shares
- Total number of EDL shares on issue decreases by 6.8%

- prices in AUD

EDL Shares On Issue			
<u>Before Transaction</u>		<u>After Transaction</u>	
Ordinary Shares	106,589,487	Ordinary Shares	114,960,387
Preference Shares	16,800,000	Preference Shares	0
Total Shares	<u>123,389,487</u>	Total Shares	<u>114,960,387</u>





Infratil's Investment

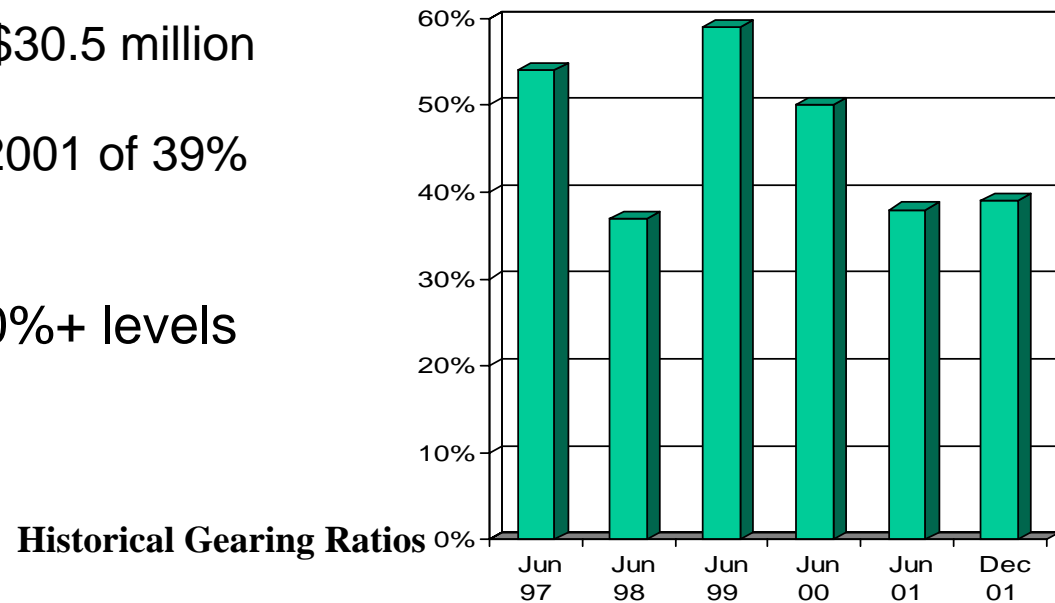
- EDL is well positioned for international growth
 - World class expertise in electricity generation from landfill gas
 - Potential to be significant global player in waste to energy sector
- Shareholding acquired in quality company with upside potential
- Initially funded from cash reserves and existing bank facilities
- Shareholder agreement with EDL
 - Some elements to be presented to EDL shareholders for approval
- Complements Infratil's existing position in hydro and wind renewables
 - Held through shareholding in TrustPower



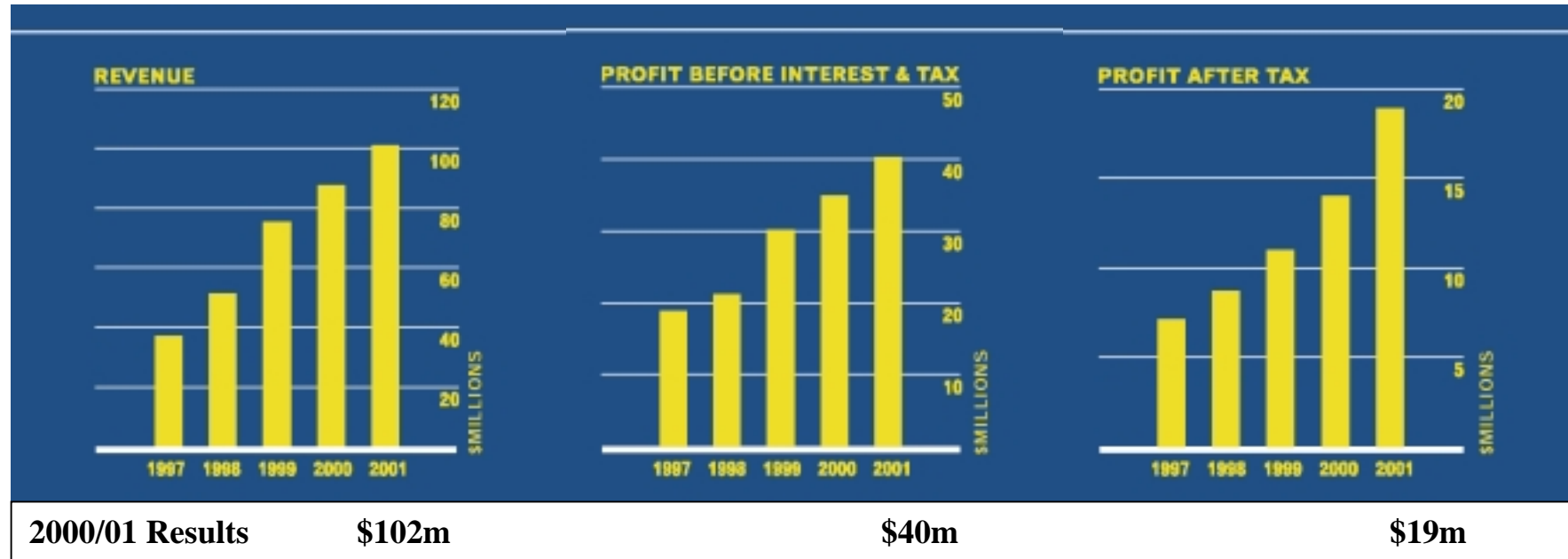
EDL's Half Year Results - December 2001

- Revenue for the half year of \$58.2 million
(2000: \$49.9 million)
 - Earnings before interest and tax (EBIT) of \$21.2 million
(2000: \$20.9 million)
 - Profit after tax of \$9.5 million
(2000: \$8.8 million)
-
- Cash at 31 Dec 2001 of \$30.5 million
(30 Jun 2001: \$23.6 million)
 - Gearing ratio at 31 Dec 2001 of 39%
(30 Jun 2001: 38%)
 - Aim to lift gearing
back towards target 50%+ levels

- results in AUD



Previous Annual Results



“Energy Developments aims to deliver superior long-term returns to its shareholders, by focusing on projects with the potential to create stable, long-term earnings and cash-flow streams”

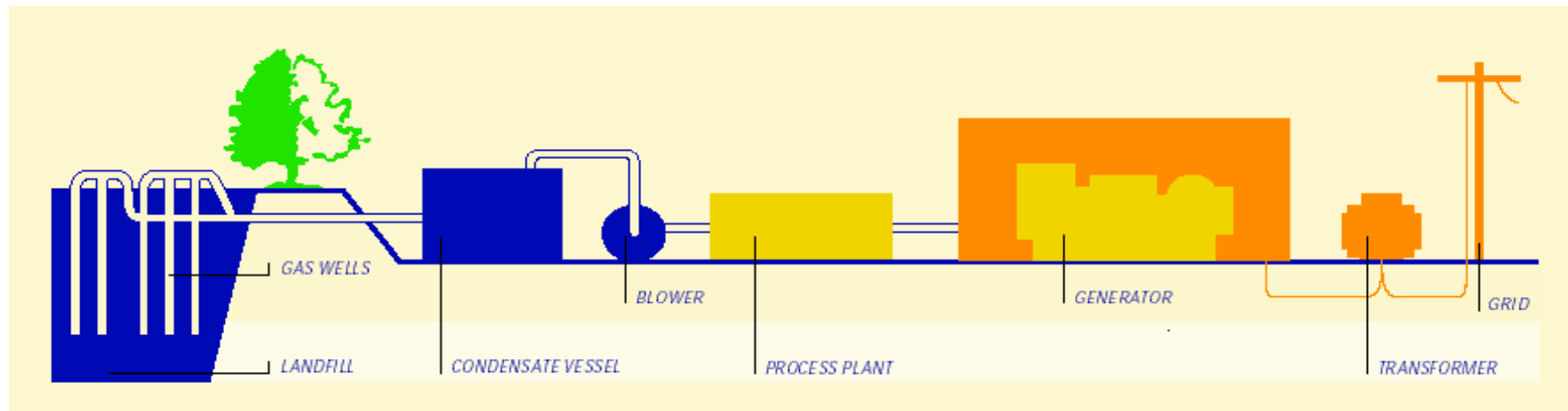
- 2001 Annual Report





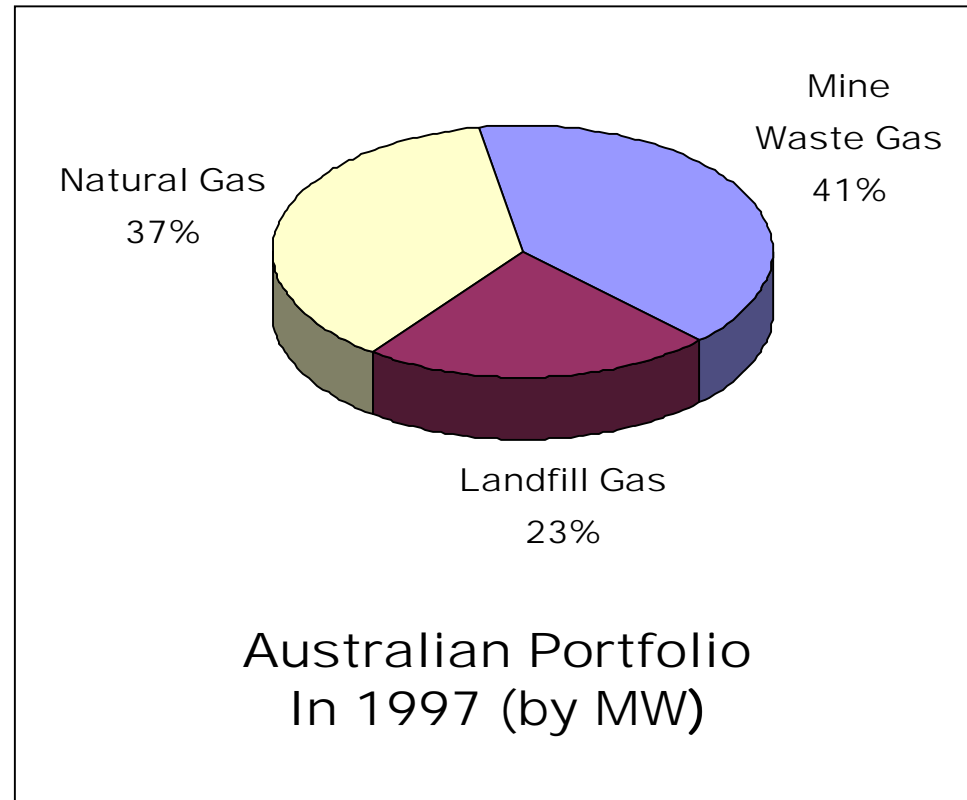
EDL Generates Electricity From Landfill Gas

- When refuse is buried in large landfills, methane is produced over many years (by anaerobic microbial activity)
- Landfill gas is an established form of non-fossil fuel
 - Methane rich gas collected, filtered and fed to engine
- Catching and burning landfill gas is environmentally beneficial
 - Escaping methane is much more potent greenhouse gas than CO₂



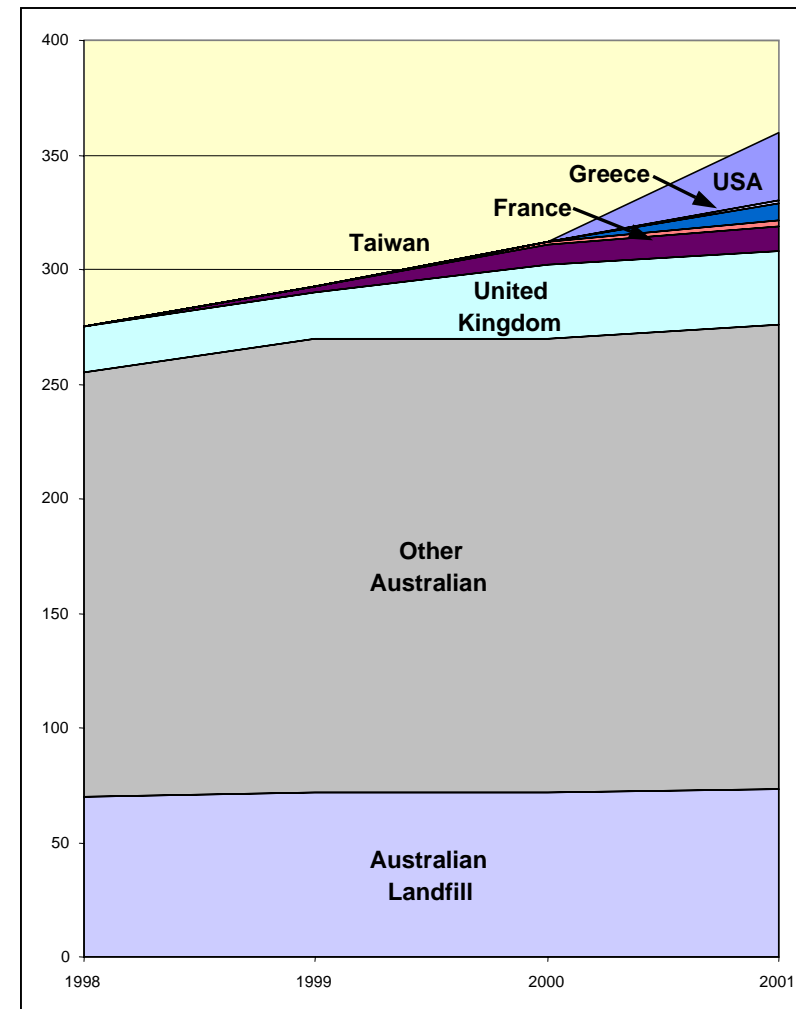
EDL Developed From Landfill Projects

- 5 landfill gas projects
- 21MW by 1994
- Waste coal seam methane is also diluted fuel gas
 - Waste methane projects at 2 coal mines in 1996
- Diversification into remote area electricity generation
- Landfill gas business continued to grow
- Total completed capacity
- 231MW by Dec 1997



International Business Development

- Since 1997, EDL has expanded internationally
 - now ~25% of capacity
- Market entries in UK/Europe, USA, Taiwan & S. Korea
- Landfill the key growth sector
 - now ~50% of EDL capacity
 - This year, 2 French projects
 - Others nearing completion in US (2) & NSW (1)
 - PPAs executed in California
 - Selected to develop a landfill site in Washington
- New SWERF[®] waste to energy technology is under development



EDL's Competitive Know-How

- Experience in Australian landfill projects has led to a low cost vertically integrated approach to project development
- Joint venture partners in some markets, especially in Europe
- In house fabrication and packing of gas field components
- Modular generation units, built in Brisbane factory, are packaged as shipping containers and transported internationally
- Typically Build-Own-Operate projects by special purpose subsidiaries with limited recourse debt



Standard 1.3MW Generation Modules



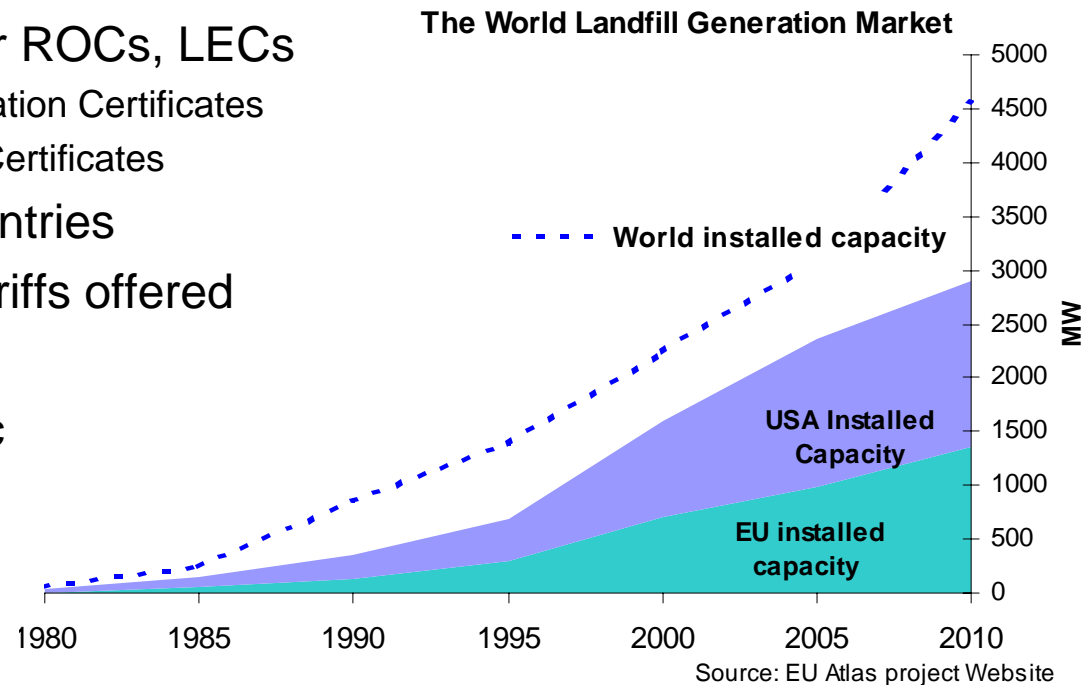
Landfill Gas Is A Worldwide Niche

- Landfills can support significant energy business
 - USA - 350 generation sites, averaging 4MW on 8m tonnes of waste
 - 40 under construction, 180 planned
 - 130m tonnes of municipal waste is dumped in landfills each year
 - Municipal Solid Waste (MSW) is a worldwide problem / resource
- Many countries are requiring the collection of gas from large landfills - even if only to “flare” it
 - EU – applies to new landfills and, progressively, existing ones
 - USA - Federal regulation of landfills > 2.5m tonnes, plus State laws
- There are fundamental drivers for exploiting this resource
 - Search for “renewable” energy, and recovery of value from waste
 - Increasingly, “green” energy earns a market price premium



Landfill Gas Is A Growth Industry

- Trend towards mechanisms that stimulate investment
 - Australia
 - Market for “Renewable Energy Certificates” required by retailers
 - UK
 - Similar markets for ROCs, LECs
 - Renewable Obligation Certificates
 - Levy Exemption Certificates
 - Various European countries
 - Special Feed-in tariffs offered
 - US
 - Tax incentives, etc
 - vary by State



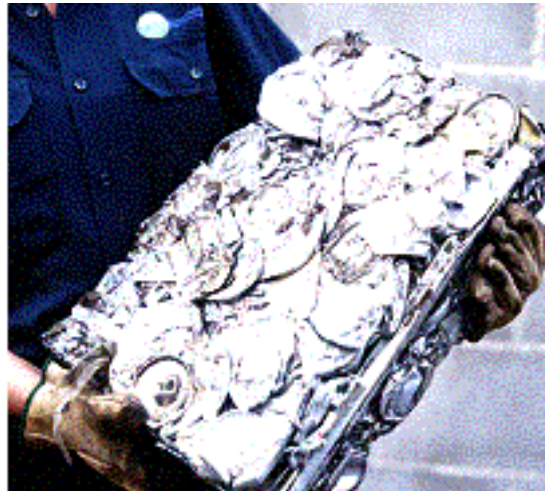
But New Landfills Will Be Limited

- Pressures to reduce use of landfills to dispose of MSW
 - Shortage of replacement sites meeting modern standards
 - Issues with cost and acceptability of transporting waste further
 - Greenhouse gas implications of methane emissions
 - Even with gas collection systems, ~20% escapes
 - Pollution risks from landfill leachate and remaining solids
- Widespread growth of measures such as Landfill Taxes
- European Union has issued a Landfill Directive
 - Mandatory reduction in biodegradable waste going to landfills
 - Major impact in countries where landfills have been widespread
 - UK, Spain, Ireland, Greece



Opportunity For SWERF®

- Incineration is the main MSW alternative to landfill, but its potential for air pollution is viewed unfavourably by public
- Direct waste-to-energy conversion is very marketable, but competing technologies are not yet fully commercialised
- Ready markets in UK, Ireland, rest of Europe and USA
- SWERF® converts MSW to synthetic fuel gas, leaving inert ash
- Preprocessing MSW improves integration with recycling initiatives
- Steps in process:
 - Waste processing
 - Includes recycling
 - Makes clean dry organic pulp
 - Syngas production
 - Electricity generation



**Aluminium
ready for
recycling**



Processing The Incoming Waste

Rotating “autoclave” pressure cooks and sterilises waste with steam

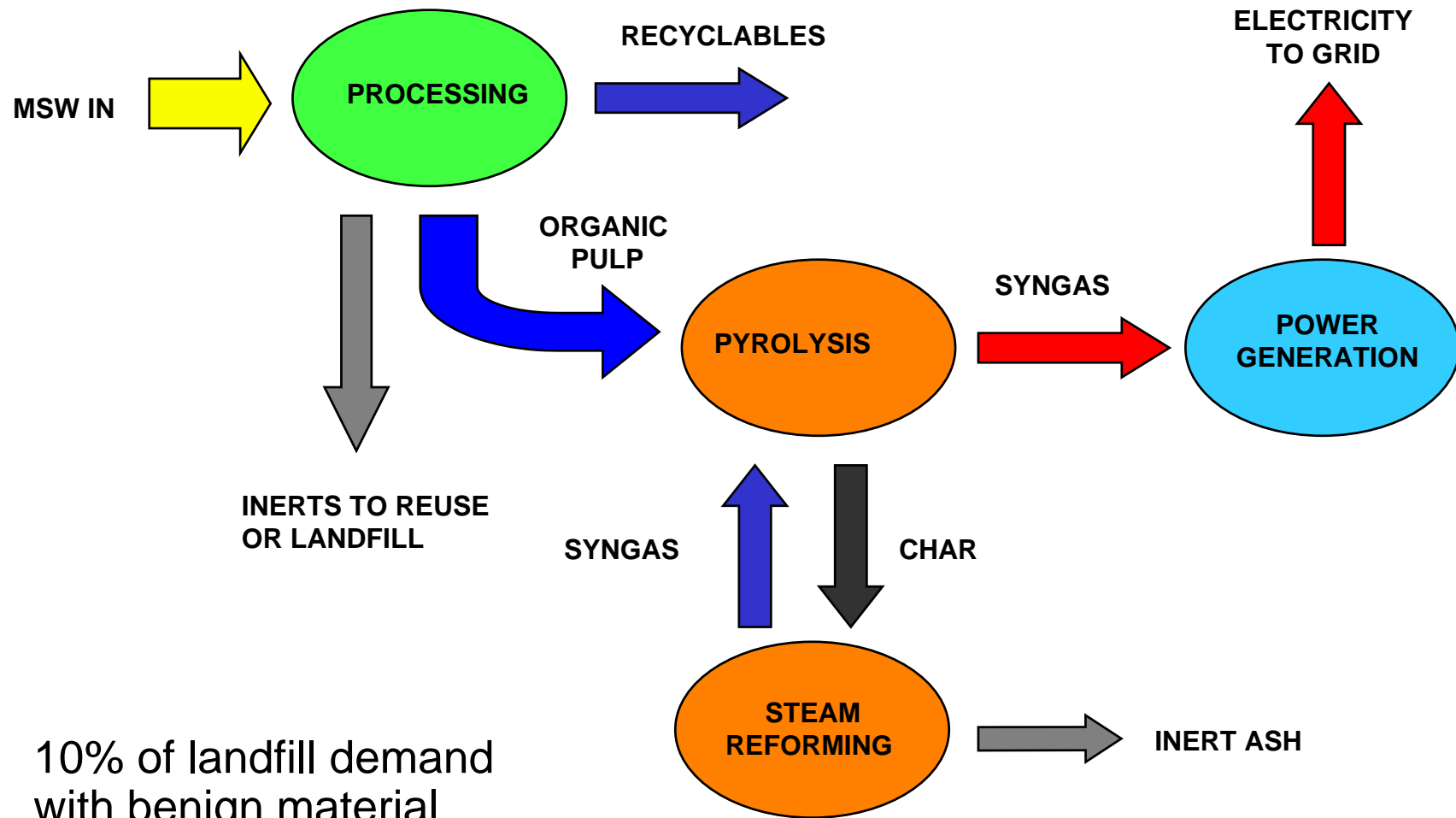


After waste is processed

- Pyrolysis of organic pulp yields syngas leaving a solid char
- Further gasification of char yields more syngas leaving inert ash



Complete SWERF[®] Process



Developing & Marketing SWERF®

- EDL subsidiary, Brightstar Environmental, implementing SWERF®
 - EDL's standard generators can use this syngas to produce electricity



Process demonstration on commercial scale at Wollongong, NSW
Uses MSW diverted from adjacent landfill



SWERF® Status

- Wollongong plant is for demonstrating technical and environmental performance of complete integrated process
- A new full scale “char gasifier” component is being installed
- Waste contract signed for a UK plant at Derby
- Selected tenderer for full-scale waste processing plant in Kent, UK
- Other Australian SWERF® plants proposed for Perth and Adelaide
- Some technical challenges remain to be overcome
 - Completion and satisfactory operation of new char gasifier design
 - Proving commercial operation of complete full scale facility
- EDL has shown ability to get technology to commercial standard





Summary

- Infratil now has a 9.99% shareholding in EDL
- EDL is a world class renewable energy business well positioned for international growth
 - Generation of electricity from landfill gas
 - Substantial potential in waste to energy sector

