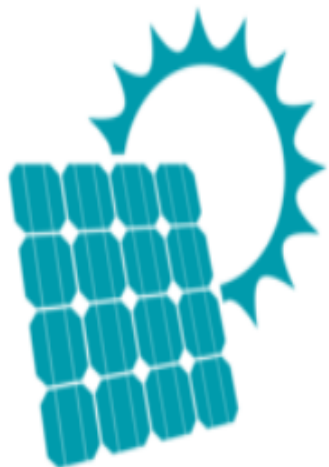


Expertise in Solar Farms

Australia June 2018 : Andrew Wilkinson Development Manager

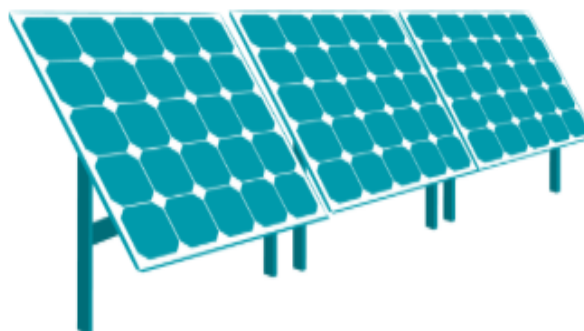
www.ibvogt.com

- HQ in Berlin, Germany
- Developer, builder and owner operator of large scale solar farms
- 140 employees globally (7 in Sydney)
- Australian Pipeline of 10 projects across VIC, QLD and NSW
- 3 projects in NSW:
 - Sebastopol (Wagga Wagga),
 - Yanco (Leeton)
 - Dunedoo (Dubbo)
- Active in Australia since 2016



> 5.0 GWp

Pipeline of solar power projects



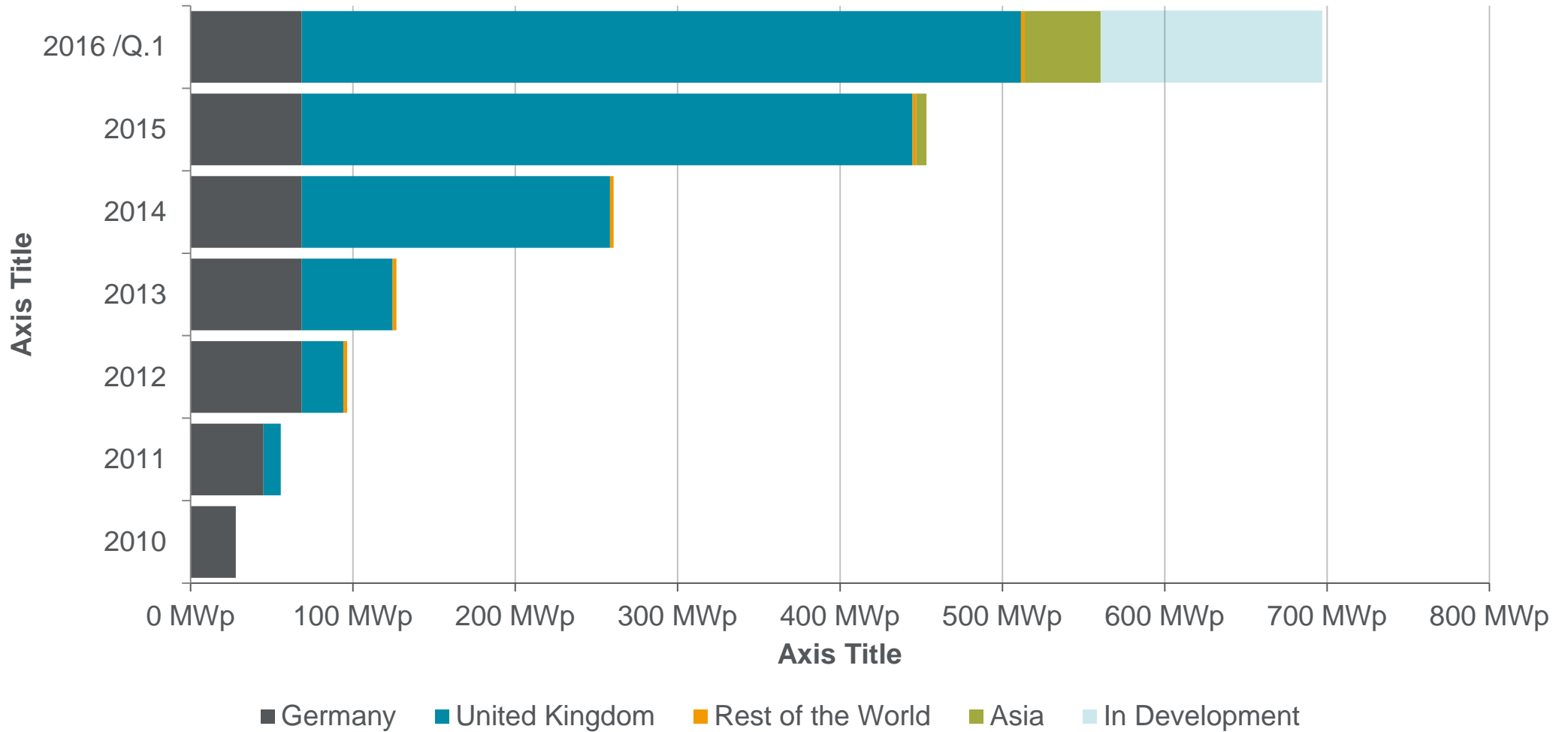
> 860 MWp

Solar power plants built and in construction



> 340 MWp

Operations & maintenance



Corporate PPA's Background: barriers to success:

External (Market):

- Businesses not aware of benefits
- Perception of complexity and high transaction costs
- Non aligned needs of sellers and buyers
- How do we standardise the PPA?
- Risk of failure to complete

Internal Barriers (within Business)

- Lack of understanding (not a core skill of the business)
- Requires focused effort and co-ordination of both parties

Note: Corporate energy teams exist within Coles and Telstra

Options for Business for energy provision:

1. Competitive power procurement (current retailers)

- Opex Savings
- No Capex required
- But only short term deals (1 – 3 years)
- Current most common method

2. On site PPA

- Long term Opex savings
- No capex required
- Medium to long term contract of 7 – 20 years
- Can be over several sites
- Need roof space or spare land:
 - 6m² of roof = 1KW of PV
 - 5 acres of land = 1MW of ground mounted PV

Options for Business:

3. On site renewables: (wind, solar) considerations:

- Reduced long term Opex
- Up front Capex is significant (\$1.2 -\$1.4M / MW installed)
- Site specific design
- Skill set: is a development partner needed?
- Long term asset management (ownership, operation and maintenance)

4. Corporate PPA's snapshot:

- Current spot price 8.5 c /kWh / 85\$ /MWh
- Spot prices = volatility of the energy market
- Price hikes: last week maximum of 210 \$/MWh due to unplanned coal shutdowns
- PPA contract = medium / long term lock in = energy price certainty
- LGC requirement ? – cheaper to contract than buy direct from the Market
- Contract term can now be as short as 3 years

Examples: (UK)



Dewlay Cheese UK:

- 2MW / 126m Wind Turbine
- 1,100 homes equivalent energy generation
- Installed 2010

Belfast

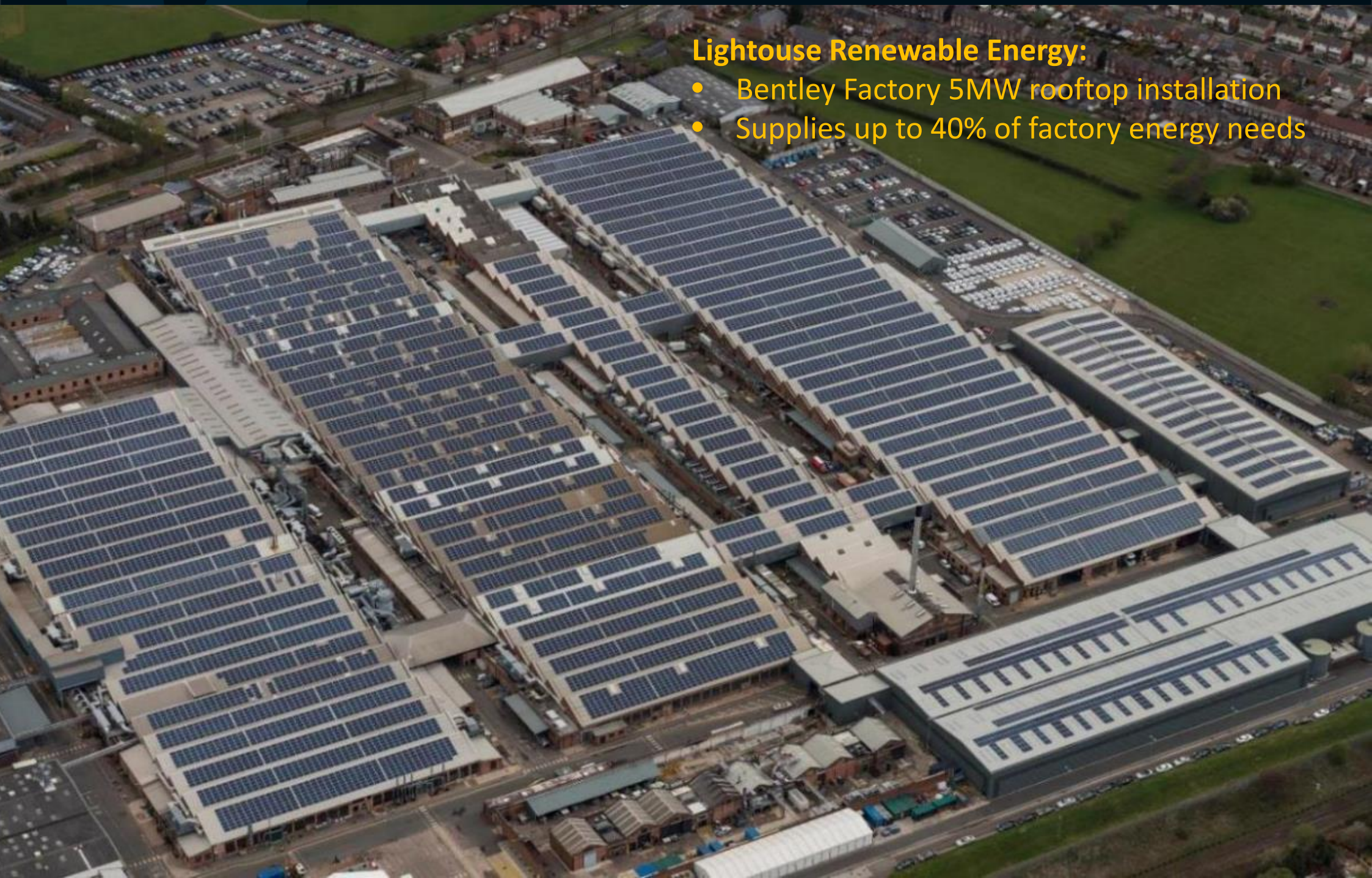
International Airport



Lightsource Renewable Energy:

- 5MW Solar Farm / 27% of Belfast Airport's total energy need
- \$180,000 annual savings





Lighthouse Renewable Energy:

- Bentley Factory 5MW rooftop installation
- Supplies up to 40% of factory energy needs

Sebastopol Solar Farm:

- 140MW over 700 acres
- Annual generation of 300 GWh
- Sufficient for 20,000 households
- Battery packs (tba)
- July DA submission
- 2019 Q2 scheduled build

Our Proposal:

contract for single or energy group offtaker of a minimum of 40% of total annual production



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