

APSE – SCOTTISH ENERGY SUMMIT

3 October 2018

A Commercial Approach to Energy in Nottingham



Nottingham
City Council

Energy
Services

Wayne Bexton

Head of Energy Services



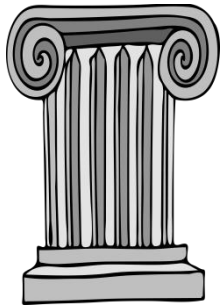
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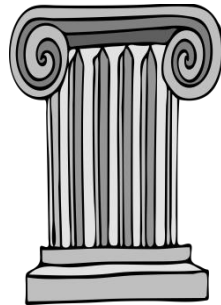
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The “Four Pillars” NCC Commercialism

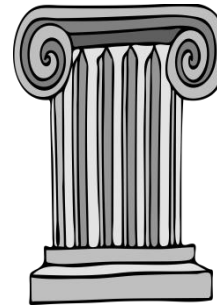
**Product
&
Service**



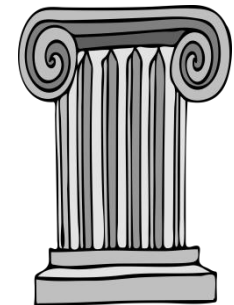
**People
&
Team**



**The
NCC
Bridge**



**True
Partners**



Unity is Strength

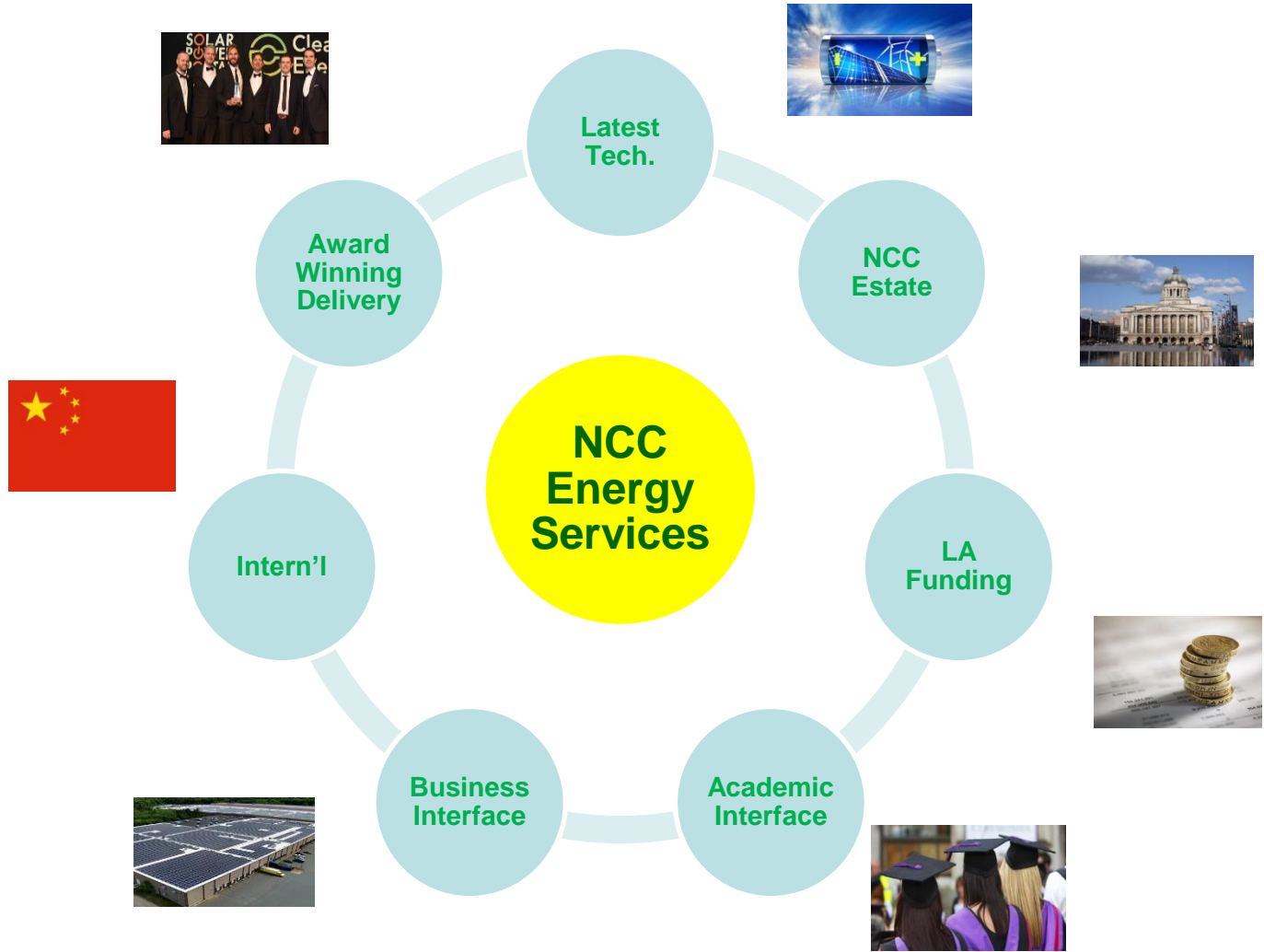
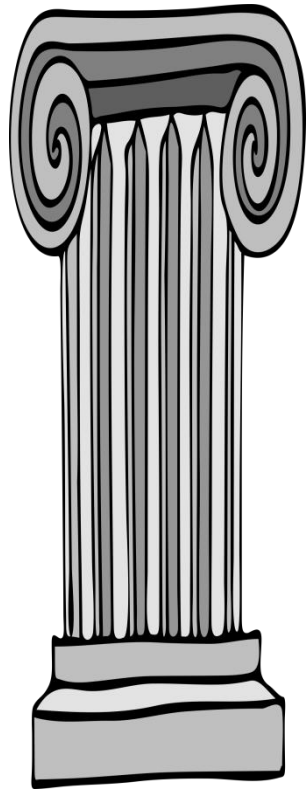


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Products & Service

Pillar
1



Strength & Depth



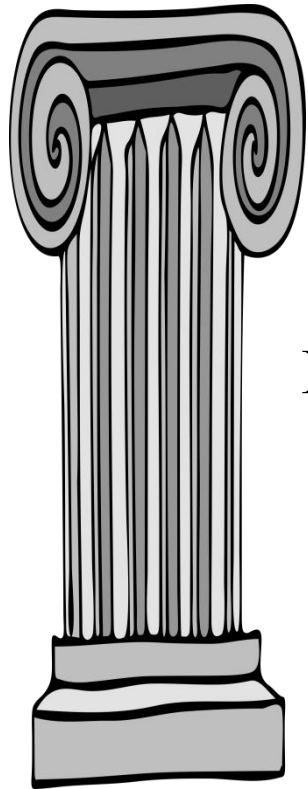
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People & Team

Pillar

2



Strategic

Public

Innovation

Policy



Private

Delivery

International

Commercial

A Perfect Balance...



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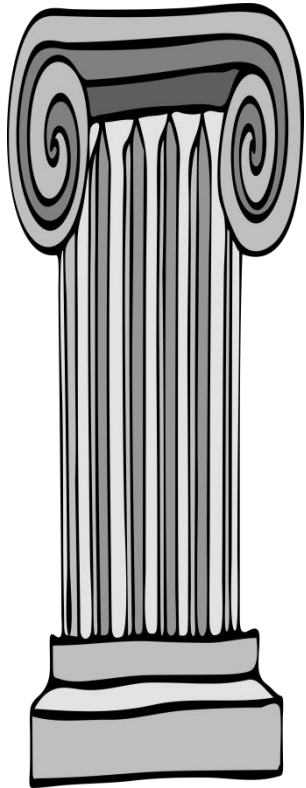
The NCC Bridge

Pillar

3

Public

Private



Grants

Matched Funds

Pioneer

Incubator

Test Facilities

ROI



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True Partners

Pillar

4

A Theme Develops...

Public



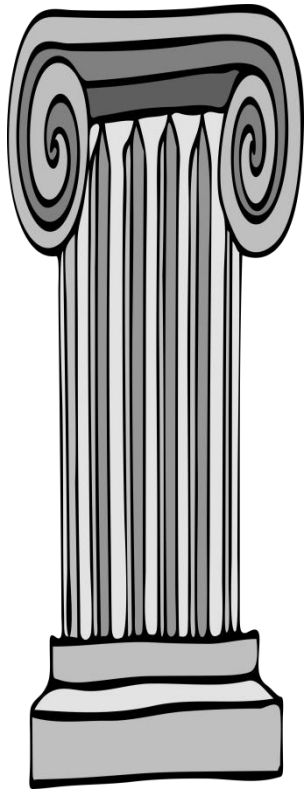
Private

Scale

Tech

Society
Focus

Large Scale “Robust” Returns



...Spark The Energy Revolution



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Energy Services

- 🌿 Renewable energy
- 💡 Smart technology & low carbon energy system
- 🌍 Energy efficiency investment | Invest to save
- 📄 Energy assessments and compliance



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Harvey Hadden Sport Village

Case Study: 001

Solar PV

- ❑ Total kWp: 67
- ❑ Number of panels: 448
- ❑ Area: 400 m²
- ❑ Estimated generation: 51,000 kWh
- ❑ Carbon savings (tonnes): 29
- ❑ Percentage reduction in imported electricity: up to 30%



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Nottingham Tennis Centre

Case Study: 002

Solar PV

- ❑ Total kWp: 151
- ❑ Number of panels: 600
- ❑ Area: 888 m²
- ❑ Estimated generation: 118,832
- ❑ Carbon savings (tonnes): 62
- ❑ Percentage reduction in imported electricity: up to 100%



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Ken Martin Leisure Centre

Case Study: 003

Solar PV

- ❑ Total kWp: 88.5
- ❑ Number of panels: 354
- ❑ Area: 400 m² coverage: 520
- ❑ Estimated generation: 710,000 kWh
- ❑ Carbon savings (tonnes): 376
- ❑ Percentage reduction in imported electricity: up to 35%



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Victoria Leisure Centre

Case Study: 004

Solar PV

- ❑ Total kWp: 43.22
- ❑ Number of panels: 172
- ❑ Area: 254 m²
- ❑ Estimated generation: 35,000 kWh
- ❑ Carbon savings (tonnes): 20
- ❑ Percentage reduction in imported electricity: up to 25%



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Minver Sports Centre

Case Study: 005

Solar PV

- ❑ Total kWp: 49
- ❑ Number of panels: 175
- ❑ Area: 288 m²
- ❑ Estimated generation: 42,000
- ❑ Carbon savings (tonnes): 24
- ❑ Percentage reduction in imported electricity: up to 100%



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Wilford Crematorium

Case Study: 006

Solar PV

- ❑ Total kWp: 23.25
- ❑ Number of panels: 93
- ❑ Area: 137 m²
- ❑ Estimated generation: 19,900 kWh
- ❑ Carbon savings (tonnes): 10
- ❑ Percentage reduction in imported electricity: up to 20%



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Theatre Royal

Case Study: 007

Salix Lighting

- ❑ 724 LED's installed, illuminating the atrium with low cost lighting and cooler colours meaning the light is less harsh
- ❑ Annual savings: £6,800
- ❑ Lifetime savings: £88,000



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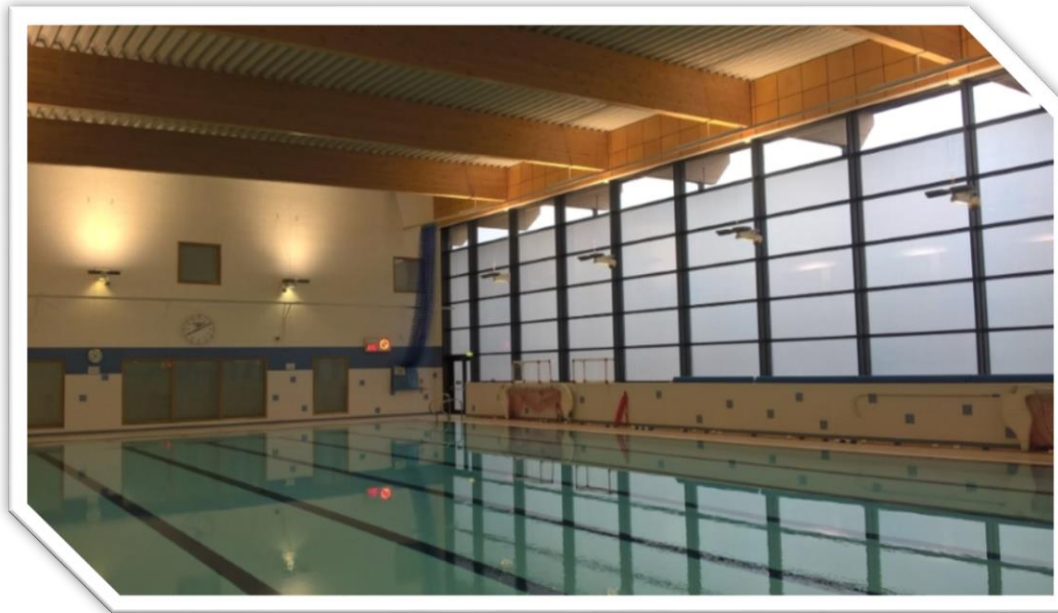
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Djanogly Leisure Centre

Case Study: 008

Salix Lighting

- ❑ LEDs installed, 24 LEDs fitted to illuminate the pool area and a further 273 LEDs installed as part of a separate project; giving affordable, low energy use lighting to the whole complex
- ❑ Project cost: £36,009
- ❑ Annual savings: £8,020.80
- ❑ Annual carbon savings (tonnes): 33.2



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Energy Projects
Service

Ken Martin Canopy Battery

Case Study: 009

Battery Project

- ❑ Total capacity: 8kWh
- ❑ Offsets standard grid prices by charging up in the day and discharging during dark hours
- ❑ Provides power for LED lighting and other amenities
- ❑ Live monitoring of battery performance and status
- ❑ Modular set up, meaning the system is futureproof as you can add more cells when required



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Loxley House Server Room

Case Study: 010

Salix Server Virtualisation

- ❑ Annual savings: £80,470.28
- ❑ Annual carbon savings (tonnes): 145.98
- ❑ Loxley House has had a change to the server room where the servers have been virtualised. In result of the virtualisation no demand for cooling is required by the servers meaning the cooling system can now be used for general cooling of the building, lowering the consumption of energy for air conditioning



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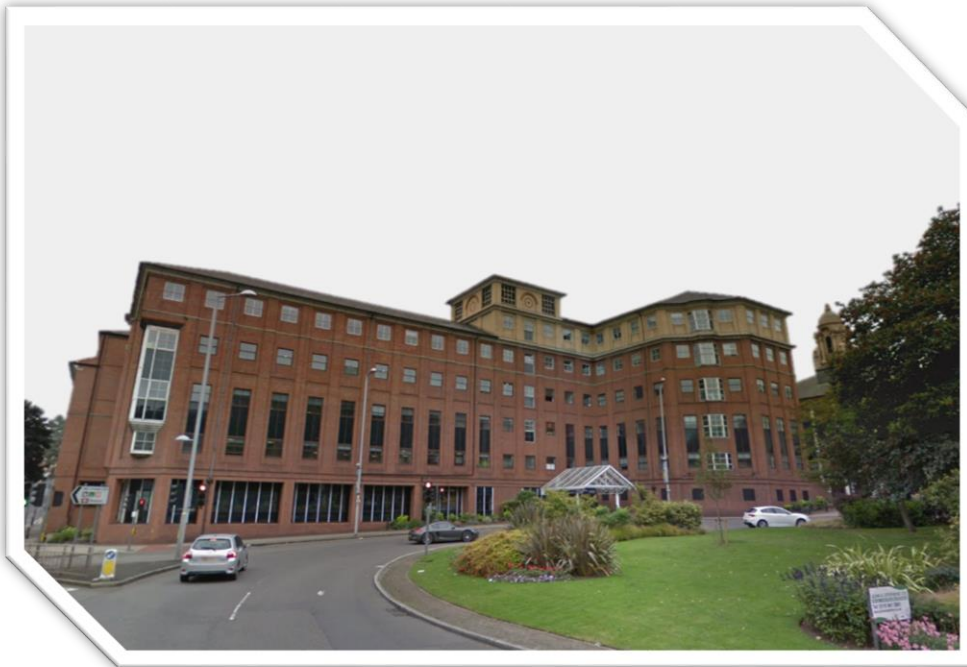
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Byron House Fuel Cell Project

Case Study: 011

DEFRA Fuel Cell Project

- Annual generation (heat and power): 20,000kWh
- Annual carbon savings (tonnes): 5.7
- Decreases carbon emissions
- New innovative technology
- Funded by DEFRA (Department for Environment, Food and Rural Affairs)



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Considerations & Questions?

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