

Nottingham City Council – Solar PV BEIS – Local Capacity Support program



Michael Gallagher – Regional Energy Projects Manager

The Energy Projects Service

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



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Introducing NCC – The Energy Projects Team

- Delivered over 14MW of Solar PV in the last 3 years
- Renewable energy specialists
- Sensible use of innovative technology delivering commercial returns
- Energy investment programme management
- Income generation and energy asset management
- Leaders in the field - multiple industry award winners
- Creating the future of energy generation and smart infrastructure



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Meet the Team

- Gordon Thomson – Director of Highways and Infrastructure
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- 0115 8763395

- Wayne Bexton – Head of Energy Projects
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- Edward Gurney – Solar PV Manager
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- 0115 8763430

- Razak Joomrally – Senior Energy Projects Officer
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What have we done so far?

- ❑ Domestic 4,200 properties – Total of 12 MWp.
- ❑ 52 sites totaling 1.8 MWp.
- ❑ 2 large scale canopy sites – Largest publicly owned in the country and award winning.
- ❑ 2 sites utilizing batteries to increase benefit and for us to study further.
- ❑ Multiple award winners.



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Ken Martin Leisure Centre

Case Study: 001

- ❑ 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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Harvey Hadden Sport Village

Case Study: 002

- ❑ Total kWp: 267
- ❑ Number of panels: 1163
- ❑ Area: 1600 m²
- ❑ Estimated generation: 220,000 kWh
- ❑ Carbon savings (tonnes): 77
- ❑ Percentage reduction in imported electricity: up to 40%



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Canopy images



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Innovation – What we are doing

- Battery integrated Solar PV
- Solar carports and canopies with or without e-vehicle chargers
- Vehicle 2 Grid (V2G)
- Export limited Solar PV systems
- Large scale batteries for grid services
- Post FiT domestic PV with integrated batteries and grid services
- Energy as a Service
- Fuel cells
- PPA
- Procurement framework



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Lessons Learned

- Companies/Contractors cutting corners on public buildings to maximise their profits – lead to future maintenance issues
- Developed our own MCS accredited internal delivery and maintenance teams
- Cyclical assessments of building stock
- Finger on the pulse – fast moving tech industry
- Better investment than predicted – excellent generation



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How can we help you/others?

- Open days of our innovative sites
- OJEU compliant framework – access to market
- Open and honest advice
- Public Body – complete confidence that we will be here to honour service agreements.
- Vast industry experience and technical ability
- Tailored service – what do you want to achieve and we can help you get there.



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Midlands Energy Hub

BEIS – Local Capacity Support program



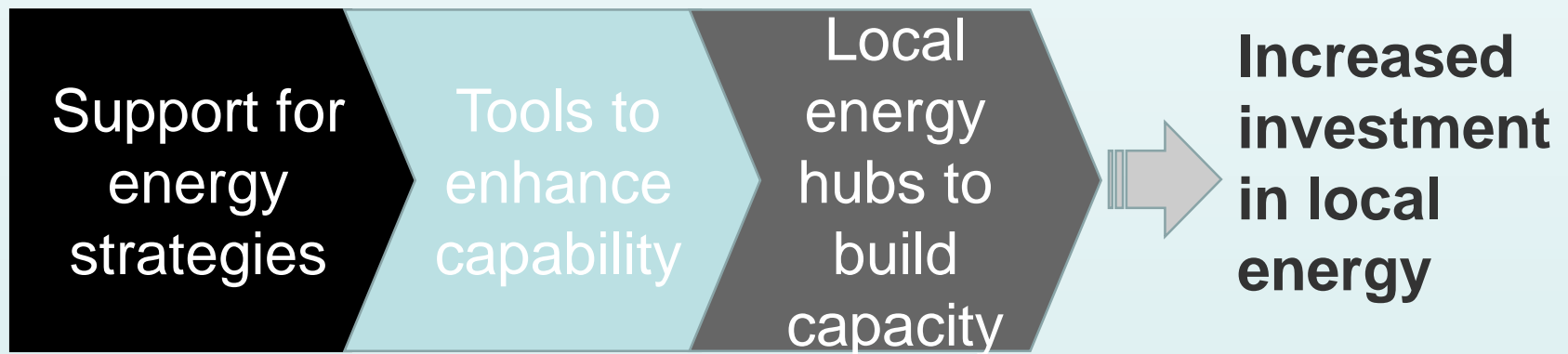
Michael Gallagher – Regional Energy Projects Manager

Midlands Energy Hub

- BEIS funded initiative
 - Support the capacity of LEPs and Local Authorities to identify and deliver local energy strategies and projects.
 - Address capacity gap of local authorities and LEPs, and improve the regional and national communication channels
 - 9 LEP areas with a locally based Senior Energy Project Officer available in each to provide support on Energy Projects.

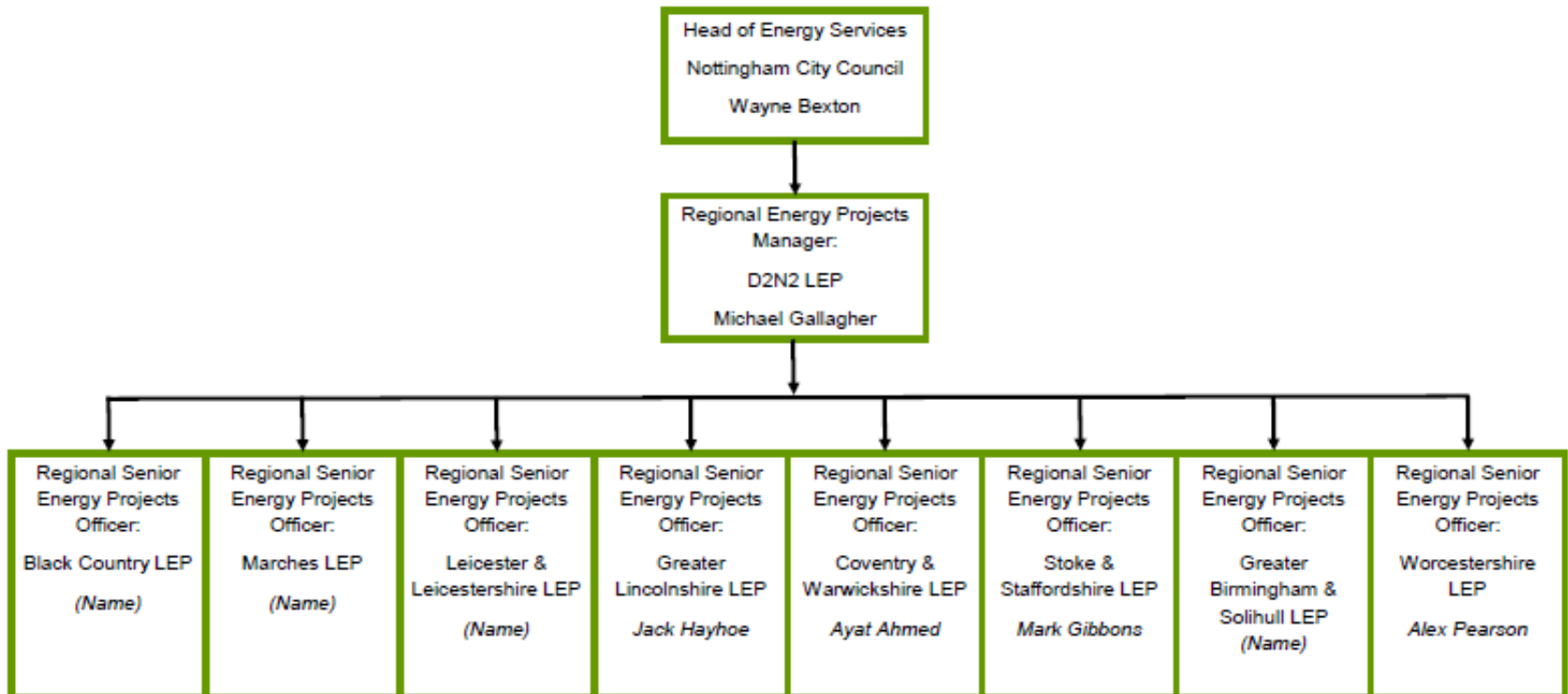
Midlands Energy Hub

- The support we are providing to local authorities and LEPs will provide resource to understand and utilise energy opportunities and challenges in their local area, undertaking the initial stages of development for priority projects



The Regional Energy Team

Midlands Energy Hub



Team Summary

- Michael – Energy efficiency, Solar PV – domestic, social, commercial, construction
- Ayat – Waste management and carbon abatement strategies for Dubai's Government
- Alex - Heat pumps, micro wind turbines, solar thermal, solar PV and biomass.
- Mark - Chartered Engineer with particular experience in Distributed Generation
- Jack - Flexible commodity energy sector supported businesses with their utility and project procurement processes

Local Approach

- LAs and LEPs are key actors in facilitating the transformation of our energy system
- Why does it matter to them:
 - Retain businesses, enhance productivity, increase economic growth, improve health, cross-sector cost reduction, meet carbon emission reduction targets

Regional Approach

- Strength of a regional team
 - Diverse skill set
 - Sharing of knowledge and good practice
 - Joint venture approach
 - Multi-project portfolio
 - Economy of scale
 - Increased investor interest

Challenges

- Lack of resource / ambition – more than half of local authorities have made little or no progress on energy and climate change
- Where LA's are actively addressing energy and climate change, performance is very varied

Challenges

- Restrictive project development capacity and capability amongst local authority and LEP teams
- Lack of capital for the initial stages of project development
- Lack of scale of projects to attract private investors – most projects fall below £10m

Energy Strategies

- Midlands LEPs have developed / are developing individual energy strategies.
- These will:
 - Identify energy opportunities and challenges across each LEP area, for power, heat and transport
 - Set out energy demand and carbon emissions trajectories
 - Provide a focus for low carbon energy projects
 - Assess the economic potential associated with this transformation, and inform the Local Industrial Strategy – important for future funding.

Linking Energy Strategy to the Local Industrial Strategy

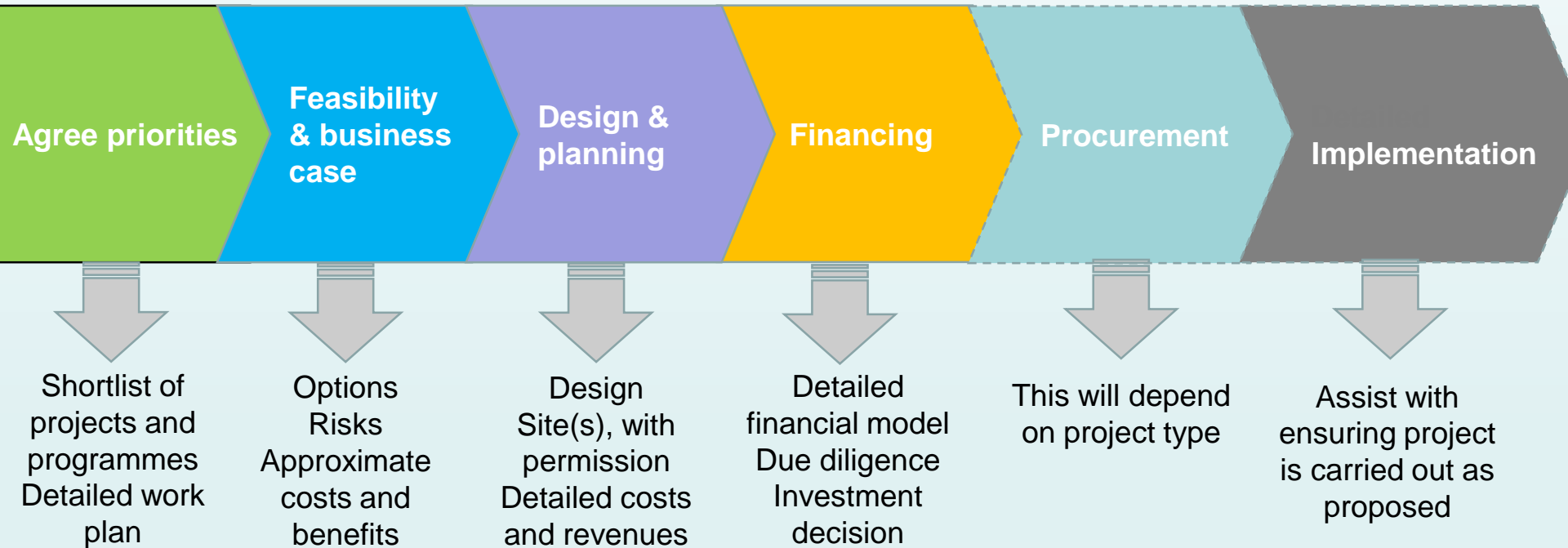
- Energy strategies to be written with LIS in mind
 - Refer and link to BEIS Industrial Strategy and Clean Growth Strategy so it translates across into the LIS
 - LIS broader focused than the energy strategies, they will be more strategic and high-level
 - Each group writing each LIS will be able to make their own decision about how to incorporate the energy strategy

Objectives of the Hubs

1. Increase number, quality and scale of local energy projects being delivered
2. Raise local awareness of opportunity for and benefits of local energy investment
3. Enable local areas to attract private and/or public finance for energy projects
4. Identify working model for teams to be financially self-sustaining after first two years

Activities of the Hubs

- Hubs will help LEPs and their local authorities through the following stages:



How objectives will be met

- Targeting realistic, deliverable projects
- Attending events / networking / knowledge sharing
- Funding bids, build relationships with private investors
- Set short, medium & long term goals
- Build a robust project pipeline



Thank you

Any questions?

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