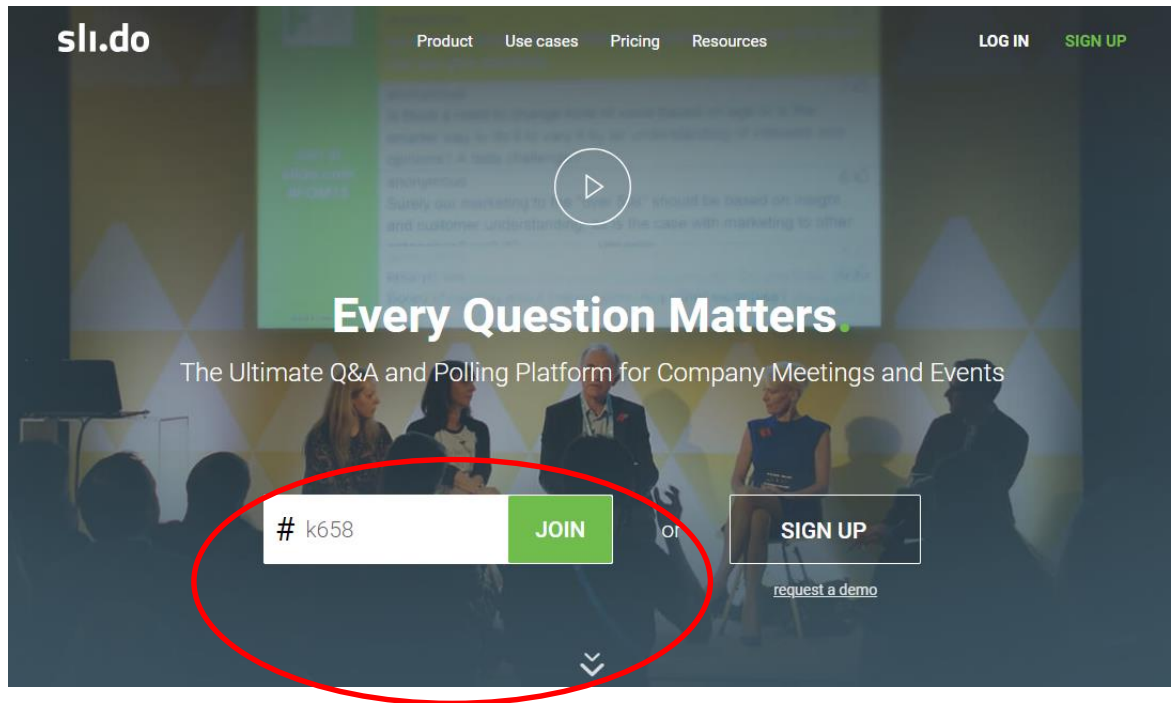




Strategic Network Investment Options
East Midlands
13th December 2018

What do you want to get out of today?

Tell us on www.sli.do. Enter code **#WPD**

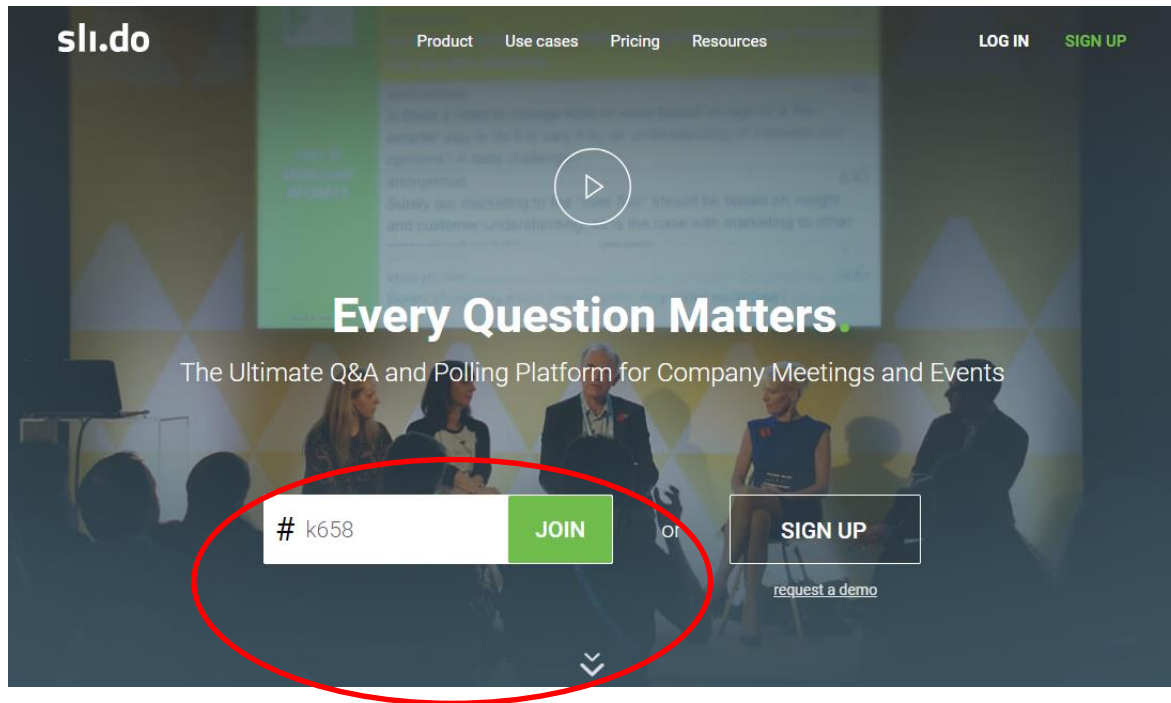


WELCOME
POPPY MALTBY, REGEN



What do you want to get out of today?

Tell us on www.sli.do. Enter code **#WPD**



AGENDA

10.00 Arrival and registration

10.30 Welcome by chair and objectives

Poppy Maltby, Senior Project Manager, Regen

10.35 Investment Strategy overview

Ben Godfrey, Network Strategy Team Manager, WPD

10.50 Generation, storage and demand technology scenarios

Frankie Mayo, analyst, Regen

11.05 Future domestic and commercial developments study

Poppy Maltby, Senior Project Manager, Regen

11.20 Break

11.30 Roundtable sessions – 1. Generation, 2. Electric Vehicles, 3. WPD Network DSO

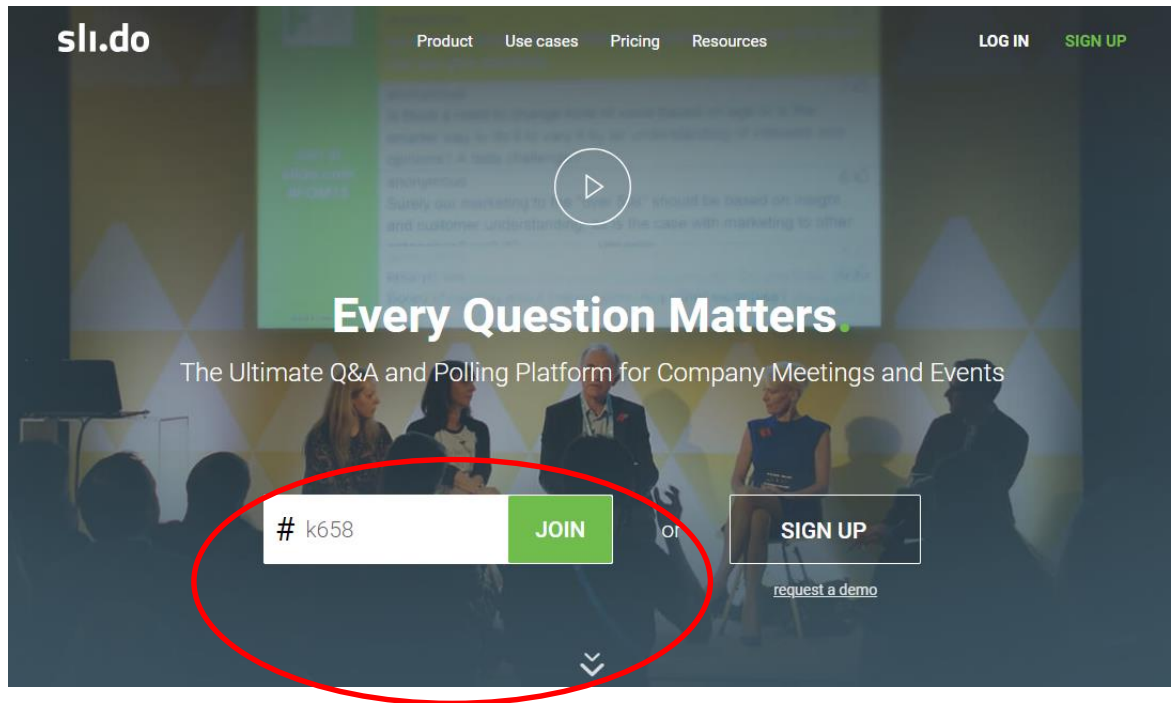
12.25 Feedback from roundtables facilitated by Chair

12.30 Summary, next steps – followed by lunch & networking

- Explain the process of strategic network investment
- Explain the process and methodology of distribution scenarios
- Present and check initial findings in key areas – new developments and generation technologies
- Consult with local stakeholders on how they feel these areas will develop
- Opportunity to feedback directly to WDP

What do you want to get out of today?

Tell us on www.sli.do. Enter code **#WPD**



STRATEGIC NETWORK INVESTMENT

BEN GODFREY, WPD





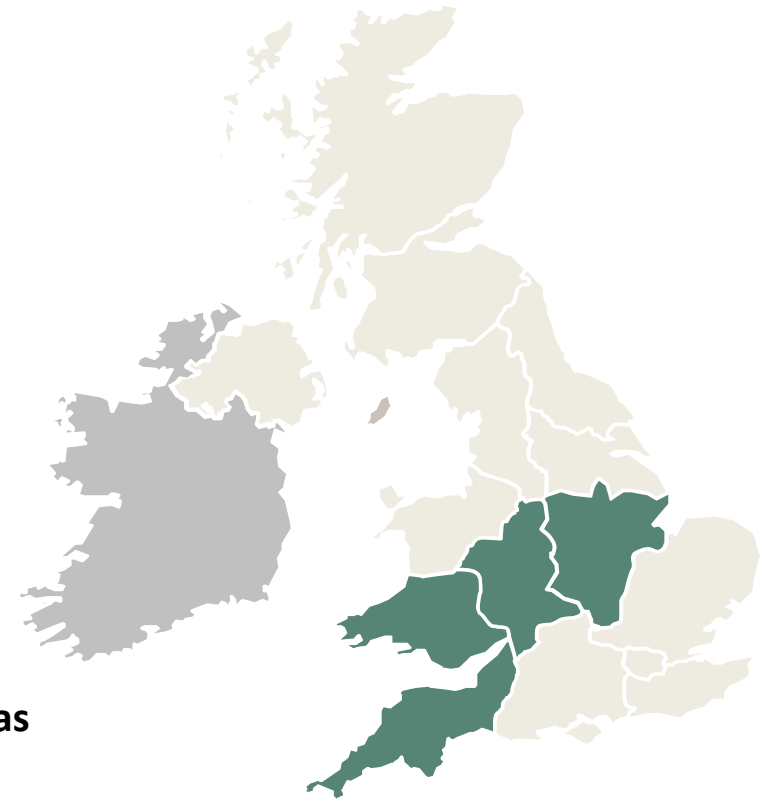
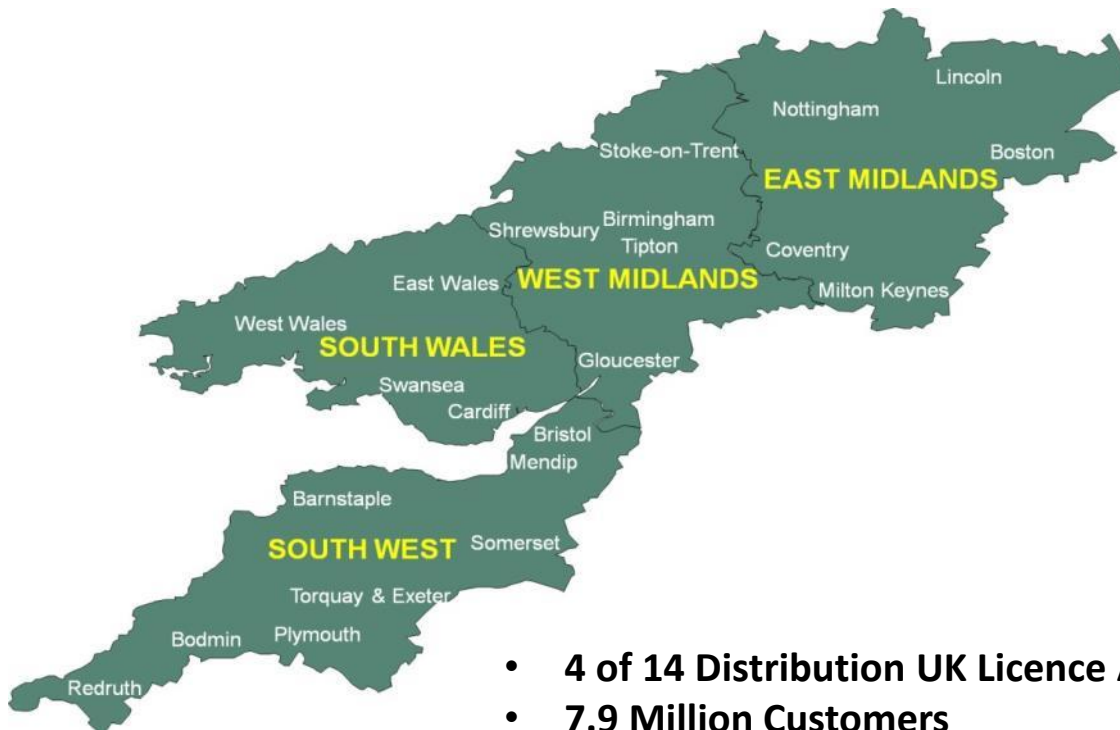
Strategic Network Investment Options
East Midlands
13th December 2018

STRATEGIC NETWORK INVESTMENT

- **Western Power Distribution – Who are we?**
- **Drivers for improved local planning**
- **Aims and approaches of investment planning work**
- **Timetable**
- **What else are we doing to help enable growth?**

WPD – OUR AREA

Western Power Distribution is responsible for distributing electricity to over 25% of the UK. We own, operate and maintain assets between 132kV and 400V.



- 4 of 14 Distribution UK Licence Areas
- 7.9 Million Customers
- Covers 55,500 Sq Km
- 220,000km of Network
- 185,000 Substations

NETWORK STRATEGY

WPD's Network Strategy team is responsible for a number of key outputs, contributing to the efficient and economic development of the network from five years out and beyond.

Our main focus topics are:

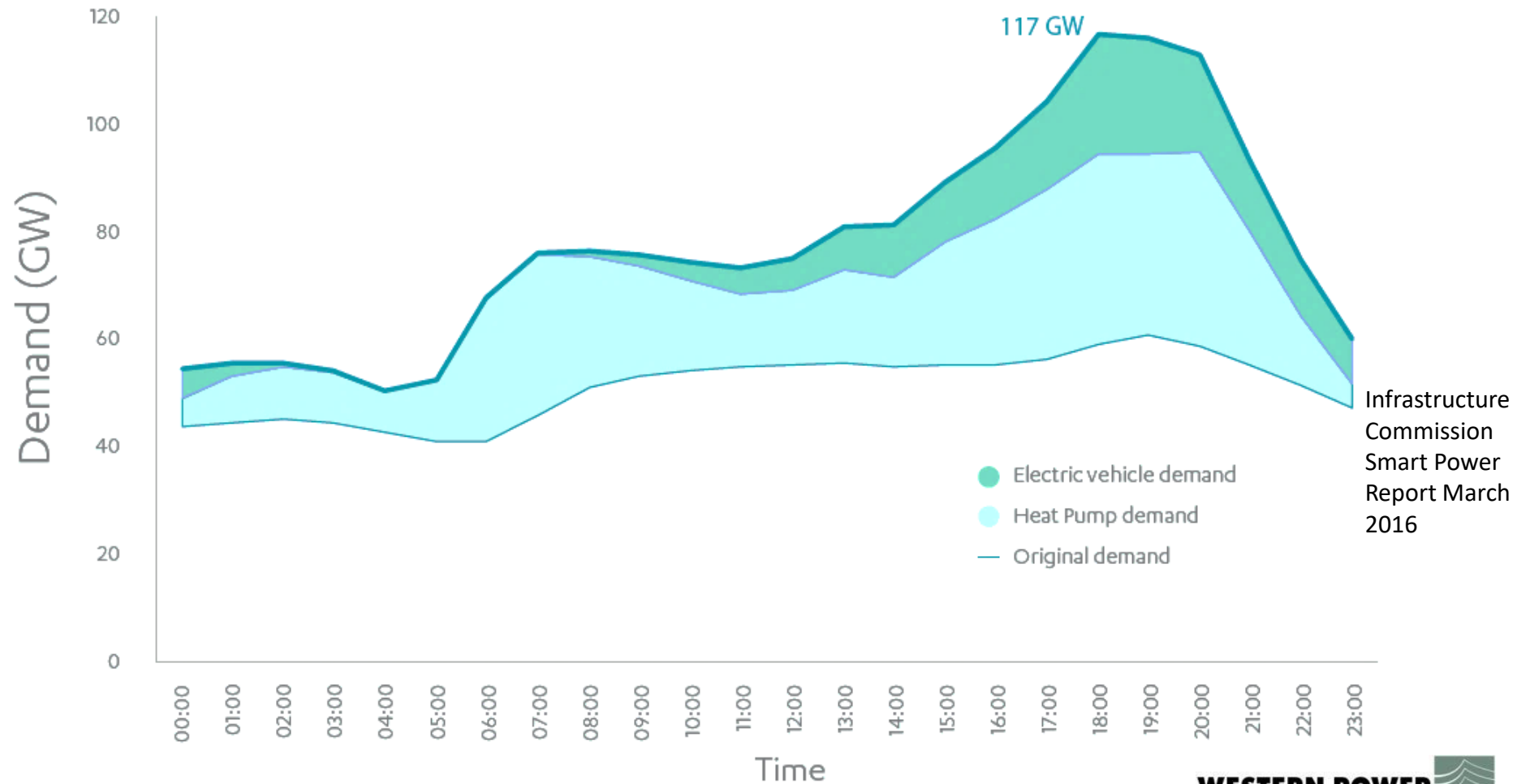
- Developing advanced modelling techniques to inform strategic studies.
- Alignment of our strategic studies with National Grid's FES work, enabling whole system working.
- Progression of a joint WPD/NGET Regional Development Plans.
- National work on developing whole system electricity outcomes through ENA's Open Networks project.
- Delivery of WPD's Distribution System Operability Framework documents.
- Development of WPD's strategy to enable transition to a DSO.
- Assessment of flexibility needs across the WPD region.
- Co-ordination of the responses to Government, regulator and external stakeholder consultations on DSO vision and strategy.

THE NEED FOR DEVELOPING OPTIONS

- Uncertainty in the future path of demand & DG growth
- Variability and volatility in network flows increasing; usage patterns changing; new technologies
- 14GW Winter Peak; 21GW DG, 12% of Energy
- Significant changes in energy system operation: need for coordination if growth is to be achieved economically
- Ofgem wanting to understand the value to the wider customer base if they were to fund strategic reinforcement
- Need to understand whether there are 'no/low regret' investment options
- What does Brexit mean for renewables, LCTs and electrical self sufficiency?

CHALLENGES OF PASSIVE NETWORKS

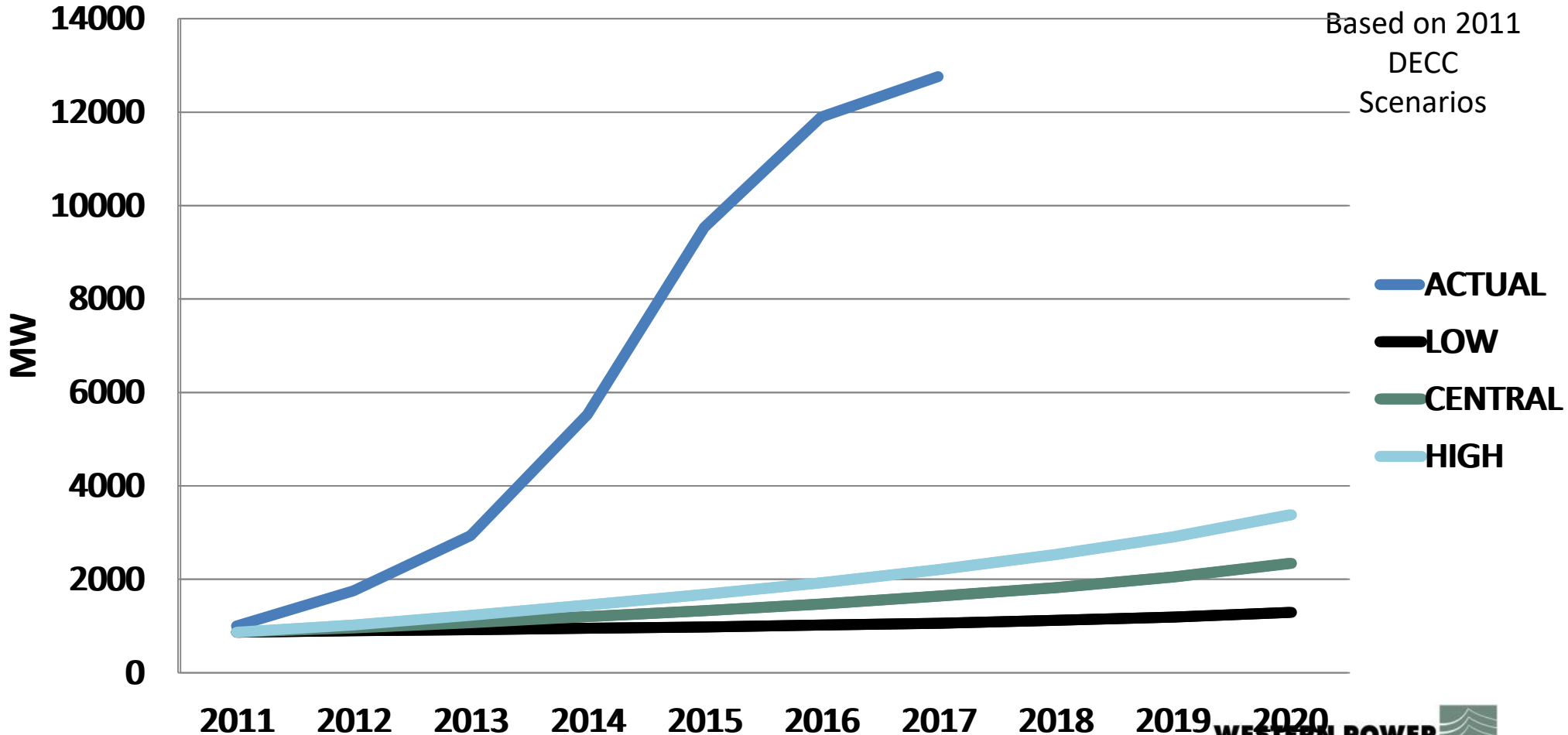
Possible future daily demand scenario with sub-optimal power system¹⁰



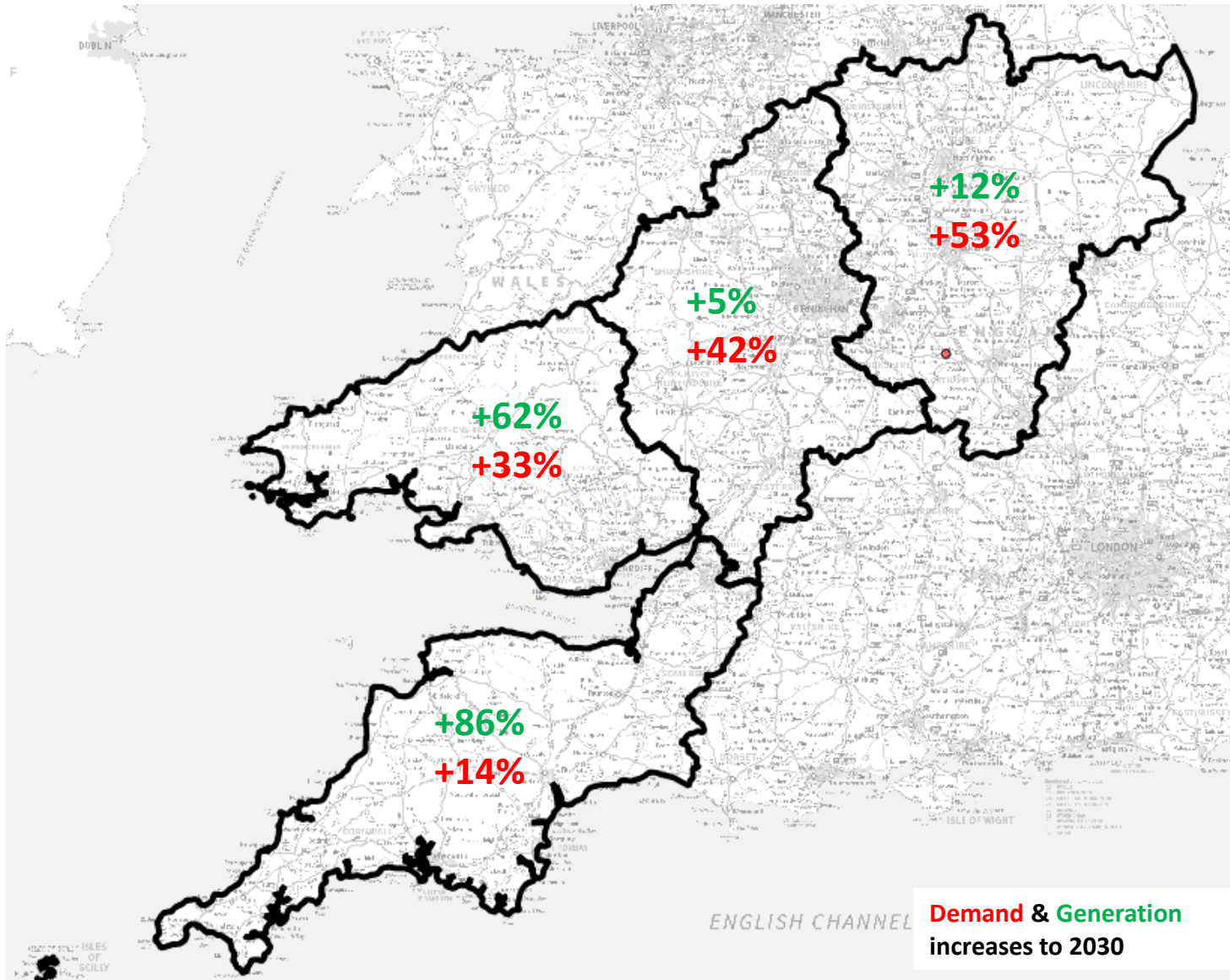
Infrastructure Commission
Smart Power
Report March
2016

DER GROWTH IS HARD TO PREDICT

PV MW Installed



REGIONALLY SPECIFIC PLANNING



Our growth scenarios out to 2030 show that both demand and generation are expected to grow significantly in all regions.

Demand & Generation
increases to 2030

CURRENT EAST MIDLANDS DG DATA

Generator type	Connected [MVA]	Accepted [MVA]	Offered [MVA]	Total [MVA]	<i>Enquired [MVA]</i>
<i>Photovoltaic</i>	1,284	732	128	2,144	246
<i>Wind</i>	604	55	-	659	-
<i>Landfill Gas, Sewage Gas, Biogas and Waste Incineration</i>	200	141	13	354	3
<i>CHP</i>	183	31	15	229	11
<i>Biomass and Energy Crops</i>	93	111	0	205	-
<i>Hydro, Tidal and Wave Power</i>	2	7	1	10	-
<i>Storage</i>	35	500	26	561	6
<i>All Other Generation (inc Mixed)</i>	1,218	682	192	2,091	78
Total	3,619	2,259	375	6,253	344

AIM OF THE STUDY



- Assessing the potential growth of customer demand and LCT uptake by type, general location and year
- Identifying thermal, voltage and fault level constraints that result
- Ensuring security of supply is maintained
- Assessing options for conventional reinforcement
- Providing recommendations for 'low regret' investment and identifying the cost and timescale of these
- Use this to understand the economic potential for demand side response and/or generation constraint to avoid reinforcement
- Begin to attach 'Energy' figures to future flexibility required

PREVIOUS OUTPUTS

WESTERN POWER DISTRIBUTION
Serving the Midlands, South West and Wales

regen
renewable energy

Distributed generation and demand study
Technology growth scenarios to 2030



Shaping Subtransmission to 2030
East Midlands – Report June 2017

WESTERN POWER DISTRIBUTION
Serving the Midlands, South West and Wales

WESTERN POWER DISTRIBUTION
Serving the Midlands, South West and Wales

regen
renewable energy

Distributed generation and demand study
Technology growth scenarios to 2030


Shaping Subtransmission to 2030
West Midlands – Report January 2018

WESTERN POWER DISTRIBUTION
Serving the Midlands, South West and Wales

WESTERN POWER DISTRIBUTION
Serving the Midlands, South West and Wales

regen
renewable energy

Distribution Future Energy Scenarios
A generation and demand study
Technology growth scenarios to 2032




Shaping Subtransmission to 2030
South West – Report July 2016

WESTERN POWER DISTRIBUTION
Serving the Midlands, South West and Wales

WESTERN POWER DISTRIBUTION
Serving the Midlands, South West and Wales

regen
renewable energy

Distributed generation and demand study
-Technology growth scenarios to 2030
South Wales licence area
September 2016



Shaping Subtransmission to 2030
South Wales – Report January 2017

WESTERN POWER DISTRIBUTION
Serving the Midlands, South West and Wales

OUTPUTS OF THE STUDY

GSP	2020	2025
Bishops Wood	CP GG	NP SP CP GG
Bushbury		CP GG
Bustleholm		CP GG
Cellarhead		NP SP CP GG
Feckenham	NP SP CP GG	NP SP CP GG
Iron Acton		
Ironbridge and Shrewsbury	CP GG	CP GG
Kitwell		CP GG
Lea Marston/Hams Hall	CP GG	NP SP CP GG
Nechells	NP SP CP GG	NP SP CP GG
Ocker Hill		CP GG
Oldbury		
Penn		SP CP GG
Port Ham/Walham	CP GG	NP SP CP GG
Rugeley	CP GG	NP SP CP GG
Willenhall	GG	SP CP GG

CP	Consumer Power
NP	No Progression
GG	Gone Green
SP	Slow Progression

TIMETABLE FOR STRATEGIC STUDIES

December 2018

Stakeholder workshop to get stakeholder input to approach and scenarios to be considered.

Q1 2019

Undertake network studies and identify solutions with costs

Q2 2019

Sensitivity work to analyse how much 'headroom' do the potential solutions give.

Q2 2019

Assess potential for demand response/generation to alleviate constraints

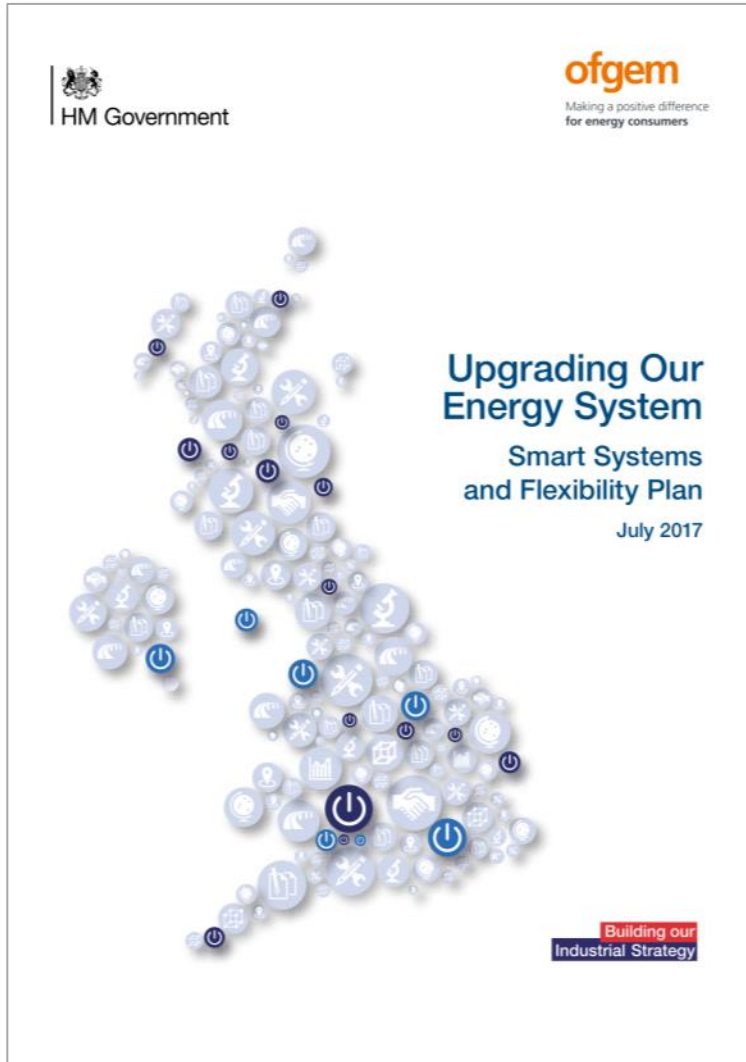
July 2019

Complete report and publish on our website

August 2019

Dissemination event by webinar – 15th August 2019

WHAT THIS MEANS FOR CUSTOMERS



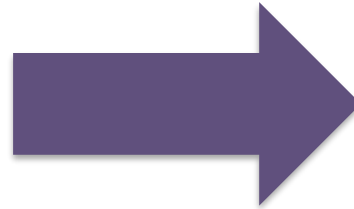
ofgem

“If we take advantage of the opportunities, we can create new businesses and jobs, empower consumers and help people save up to £40bn off their energy bills in the coming decades”

DSO TRANSITION

Distribution
Network
Operator

*Passive networks managing
maximum power flows*



Distribution
System
Operator

*Active networks managing
real-time energy flows*

Existing

- Develop and maintain an efficient, co-ordinated and economical system of electricity distribution
- Facilitate competition in electricity supply, electricity generation

New
Roles

- Facilitate flexibility services
- Improve the resilience and security of the electricity system at a local level
- Facilitate neutral markets for more efficient whole system outcomes
- Drive competition and efficiency across all aspects of the system
- Promote innovation, flexibility and non-network solutions

WHAT THIS MEANS FOR OUR CUSTOMERS

Traditional DNO operations would require very substantial investments in passive grid infrastructure, which would be underutilised much of the time.

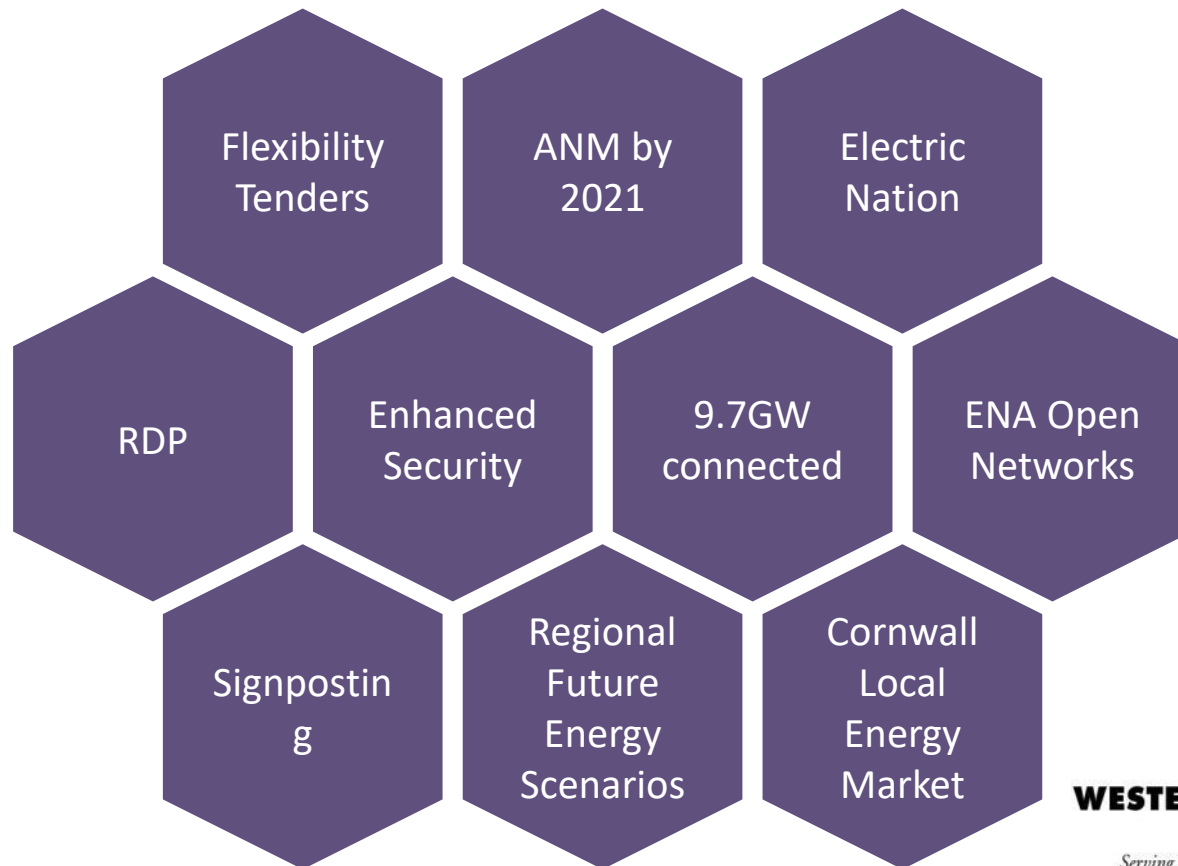
A smarter, more flexible energy system will enable customers to be able to actively participate in new flexibility markets through a variety of pathways.



WHAT THIS MEANS FOR OUR CUSTOMERS

We are already beginning to more actively manage our networks and transition to DSO. We will continue to invest in our capability to deliver smarter, more flexible networks.

Our DSO Strategy and innovation projects are already building our capability

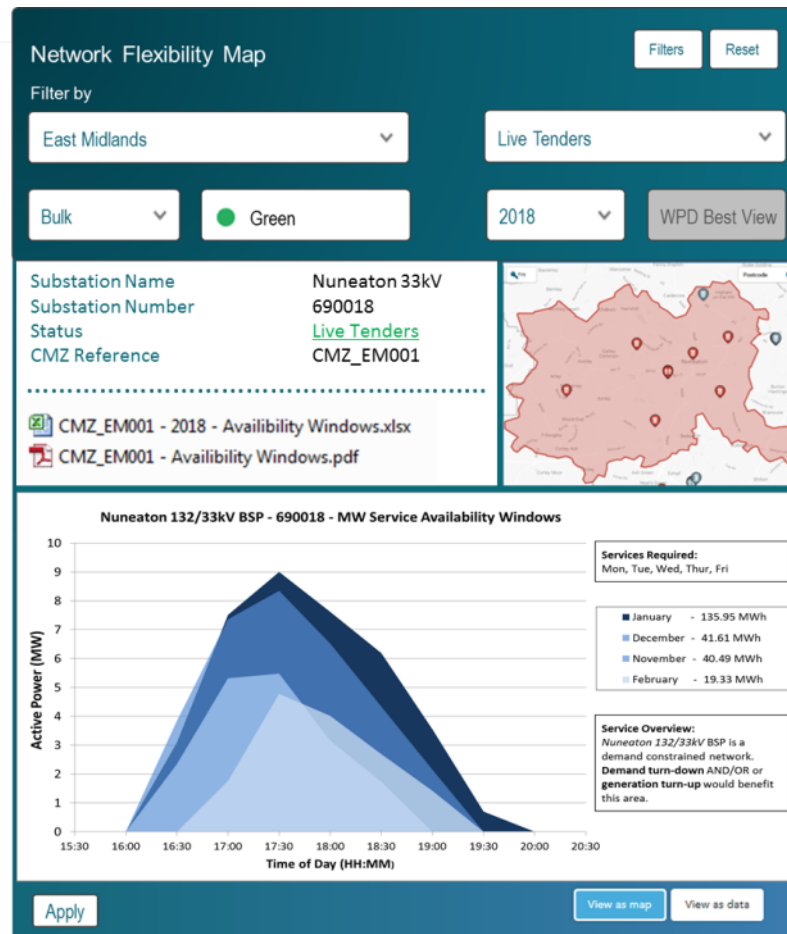
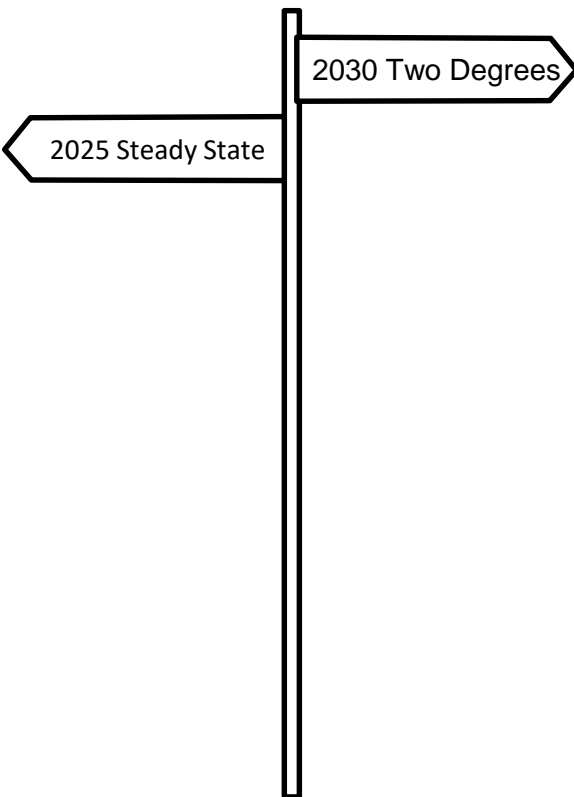


WHAT THIS MEANS FOR CUSTOMERS

- WPD is becoming more active in its approach to network operation:
 - Active Network Management - rolling out across all network
 - Extending ANM to demand and storage customers
 - Transparency with our data
- Revenue streams for DSR/flexibility services – DSO requirements will be predictable and forecast in advance.
 - Revenue from demand ‘turn up’/’turn down’ services
 - Revenue from generation ‘turn up’/’turn down’ services
 - Revenue from storage energy shifting services
 - Revenue from demand shifting/influencing
 - Revenue from reactive power support
- Quicker, more efficient connections for customers willing to become active energy system participants

WHAT THIS MEANS FOR OUR CUSTOMERS

In February we will continue to signpost our DSO flexibility requirements for all licence areas. Our service products are designed to align with the ESO's Reserve products, increasing the potential value for DSR providers.



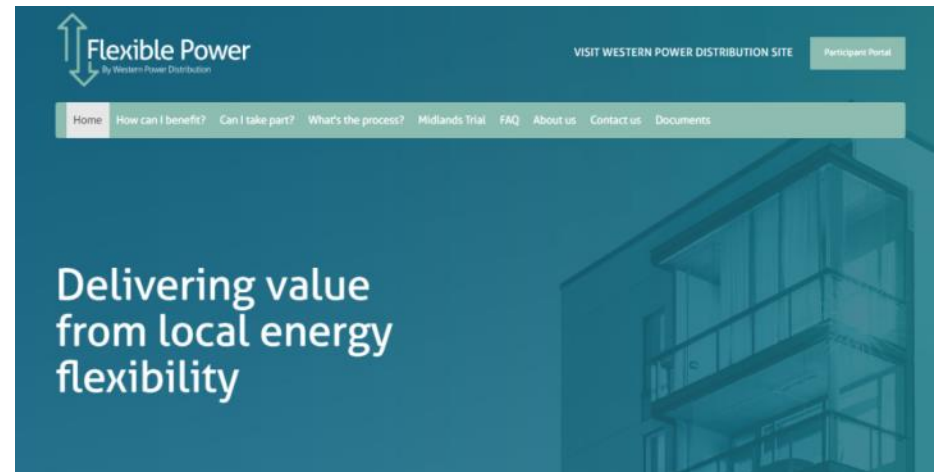
WPD's signposting information will direct flexibility providers to the different distribution system needs required under a range of scenarios and timings.

www.westernpower.co.uk/network-flexibility-map

WHAT THIS MEANS FOR OUR CUSTOMERS

How we procure

- Through Flexible Power, a WPD customer-facing brand
- Full information on website: www.flexiblepower.co.uk
- Previous Expression of Interest documents and results
- API for interfacing with available for download
- Contractual frameworks published



WHAT THIS MEANS FOR OUR CUSTOMERS

Timeline

Two Year Contracts



Expression of Interest

Early February
2019



Procure

Mid February to
March 2019



Build and Test

April to May
2019

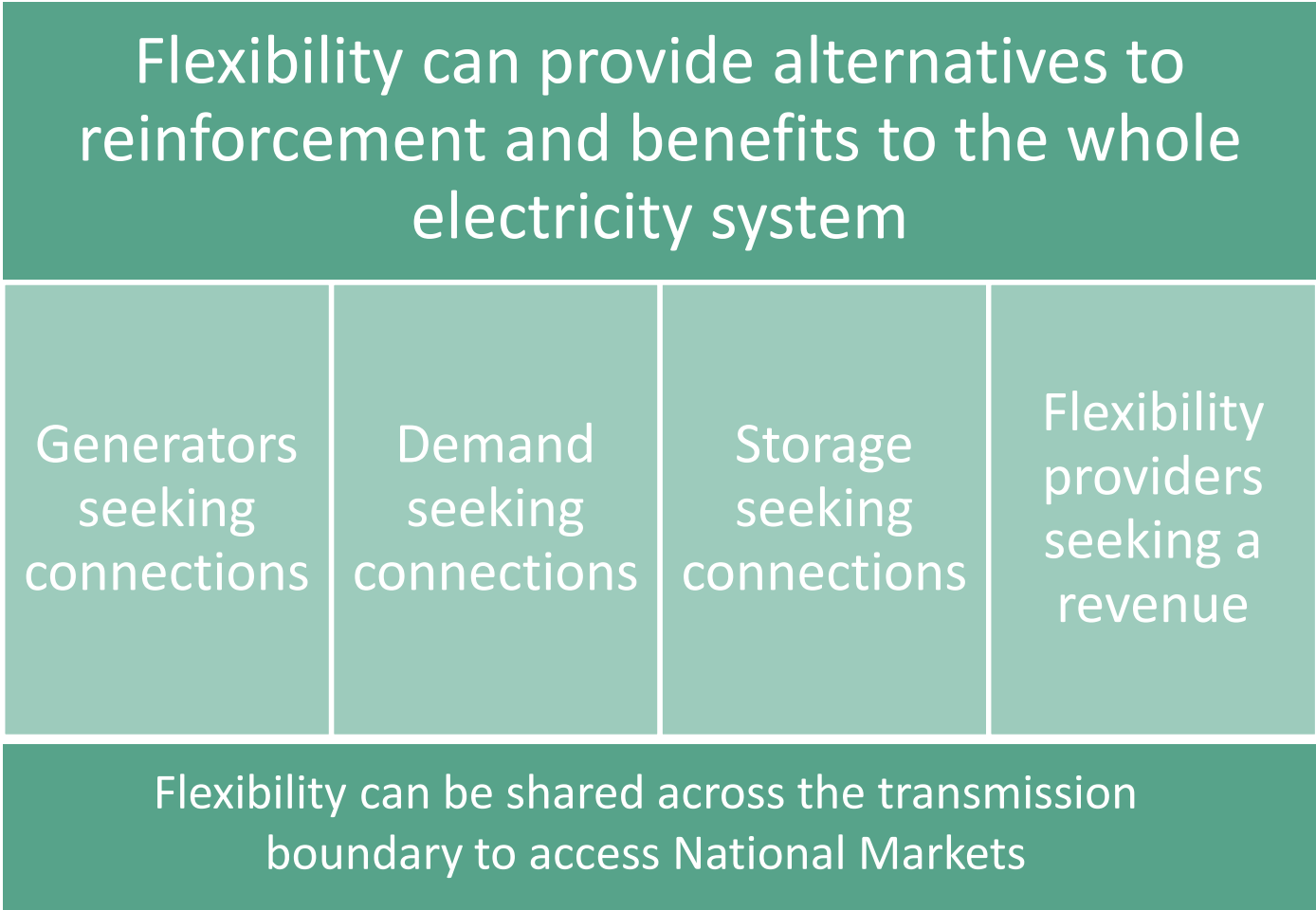


Operate

June 2019 to
May 2021

We will follow a 6 monthly procurement cycle, bringing on new flexibility zones and ensuring we meet all our system needs

WHAT THIS MEANS FOR OUR CUSTOMERS



FURTHER COLLABORATION

All our reports, webinars and presentations are published online at:

<http://www.westernpower.co.uk/netstrat>

If you have any questions in relation to WPD's Network Strategy work, please contact WPD on the details below:

Email: wpdnetworkstrategy@westernpower.co.uk

By post:

Network Strategy Team
Western Power Distribution
Feeder Road
Bristol
BS2 0TB



DISTRIBUTED GENERATION AND DEMAND STUDY TO 2032 FRANKIE MAYO, REGEN



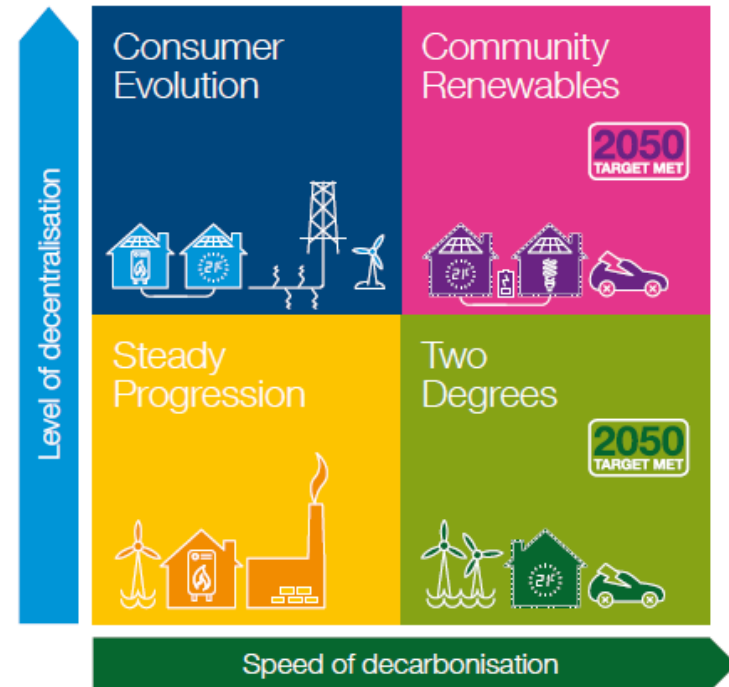


Scenarios overview

Scenarios overview

- ◆ Future energy scenarios framework
- ◆ Energy generation technologies
- ◆ Geographic scope

4 scenarios: varying levels of **decarbonisation** and decentralisation



Technologies in the scope:

Supply

Distributed electricity generation technologies

Solar PV
(rooftop and ground-mounted)

Onshore wind

Hydropower

Energy from waste
(incineration and ACT)

Anaerobic digestion

Diesel and gas generation

Demand

Disruptive electricity demand technologies

Electric vehicles

Heat pumps
(hybrid and single systems)

Air conditioning - domestic

New build developments
(domestic)

New build developments
(non-domestic)

Storage

Electrical energy storage at distribution level

Response services

Reserve services

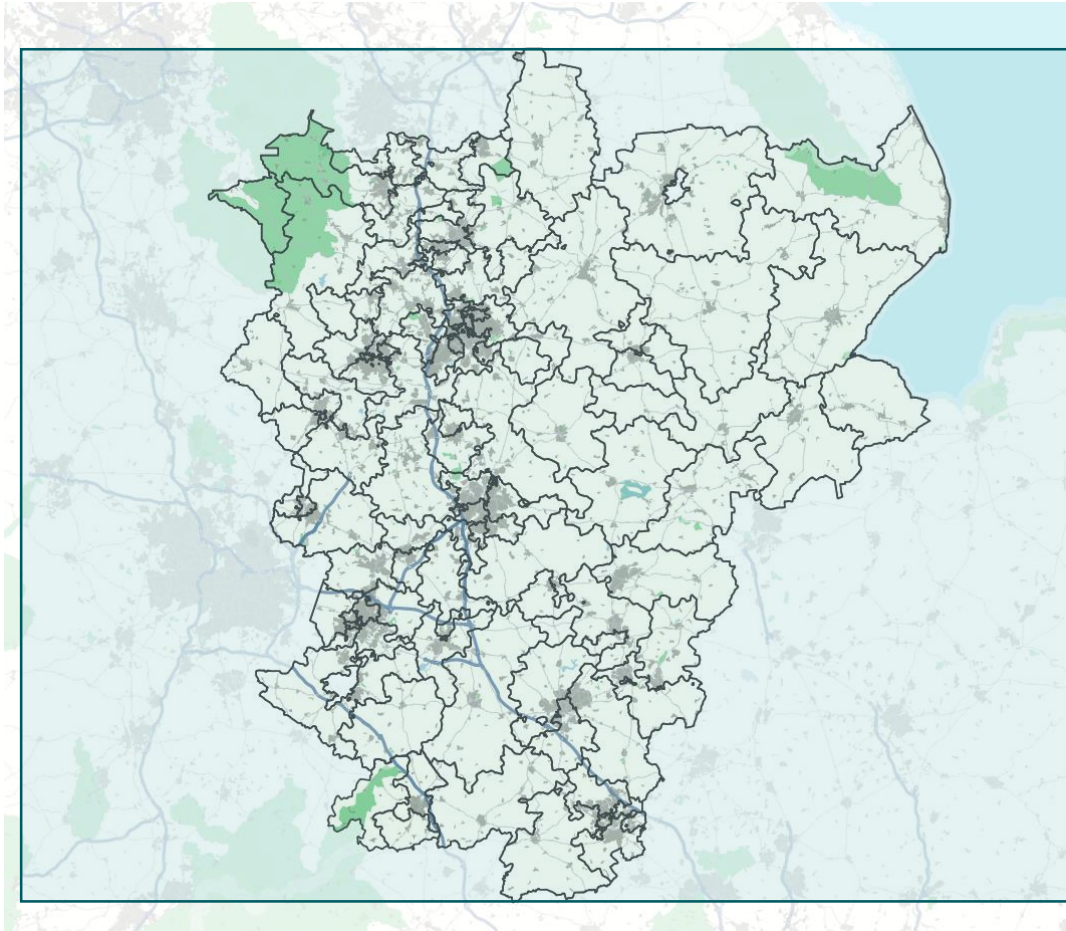
Energy trader

High energy user
(behind the meter)

Own use and community

Co-location

Geographic scope



Where will connections occur on the electricity network ?

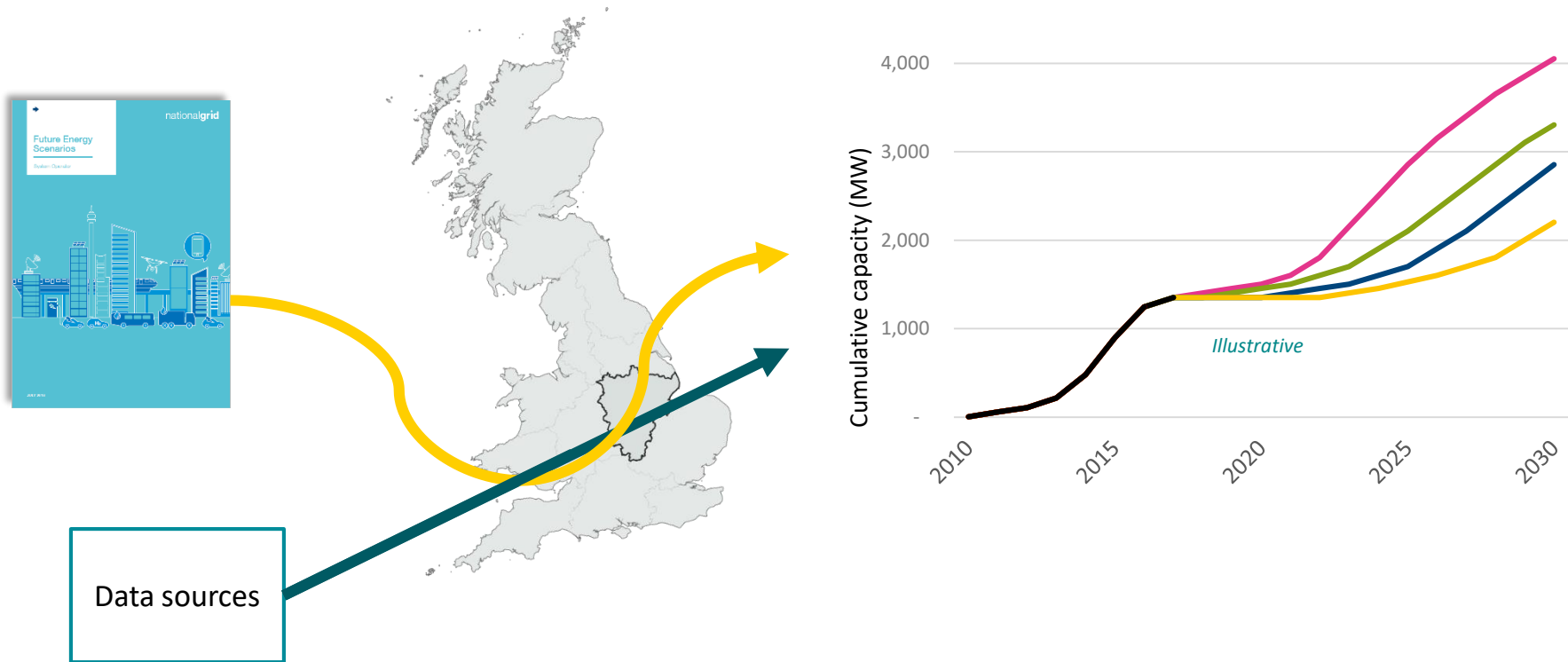
Scenarios recap

- ◆ The range of futures in the FES framework
- ◆ Our technology focus: supply, demand, and storage
- ◆ The geographic scope



Methodology

Methodology overview



A 'bottom-up', stakeholder-informed, set of future energy scenarios for the East Midlands licence area

Scenarios methodology overview

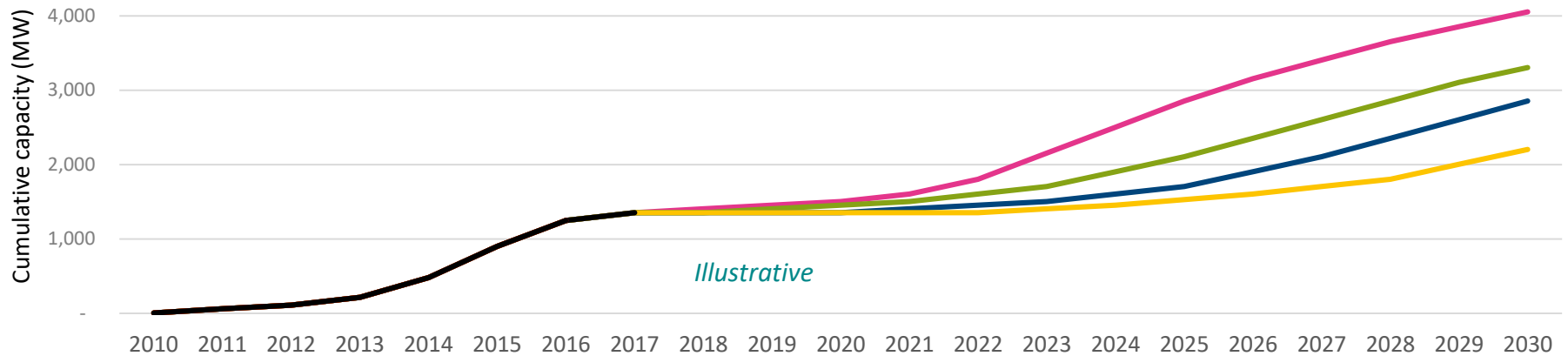
1. Baseline



2. Pipeline



3. Projections



Current baseline sources:

- WPD connection data
- Regen database
- FIT data
- ROC data
- plus other publicly available data.
- You !



Pipeline projection:

Analysis of current projects in the planning system and with grid connection agreements for large scale technologies. Dependent on technology when the pipeline goes out to.

Scenario projections (to 2032):

Growth scenarios based on National Grid's four FES 2018 scenarios– applied at a local level informed by:

- Historic and emerging local trends
- Local factors
- Resource assessments
- Stakeholder engagement

Methodology recap

- ◆ Overview of our methodology for creating the future projections
- ◆ Breaking down the 'when?' question, into baseline, pipeline, and projected connections
- ◆ The regional spatial factors we are considering



The East Midlands energy story



Gnce upon
a time...

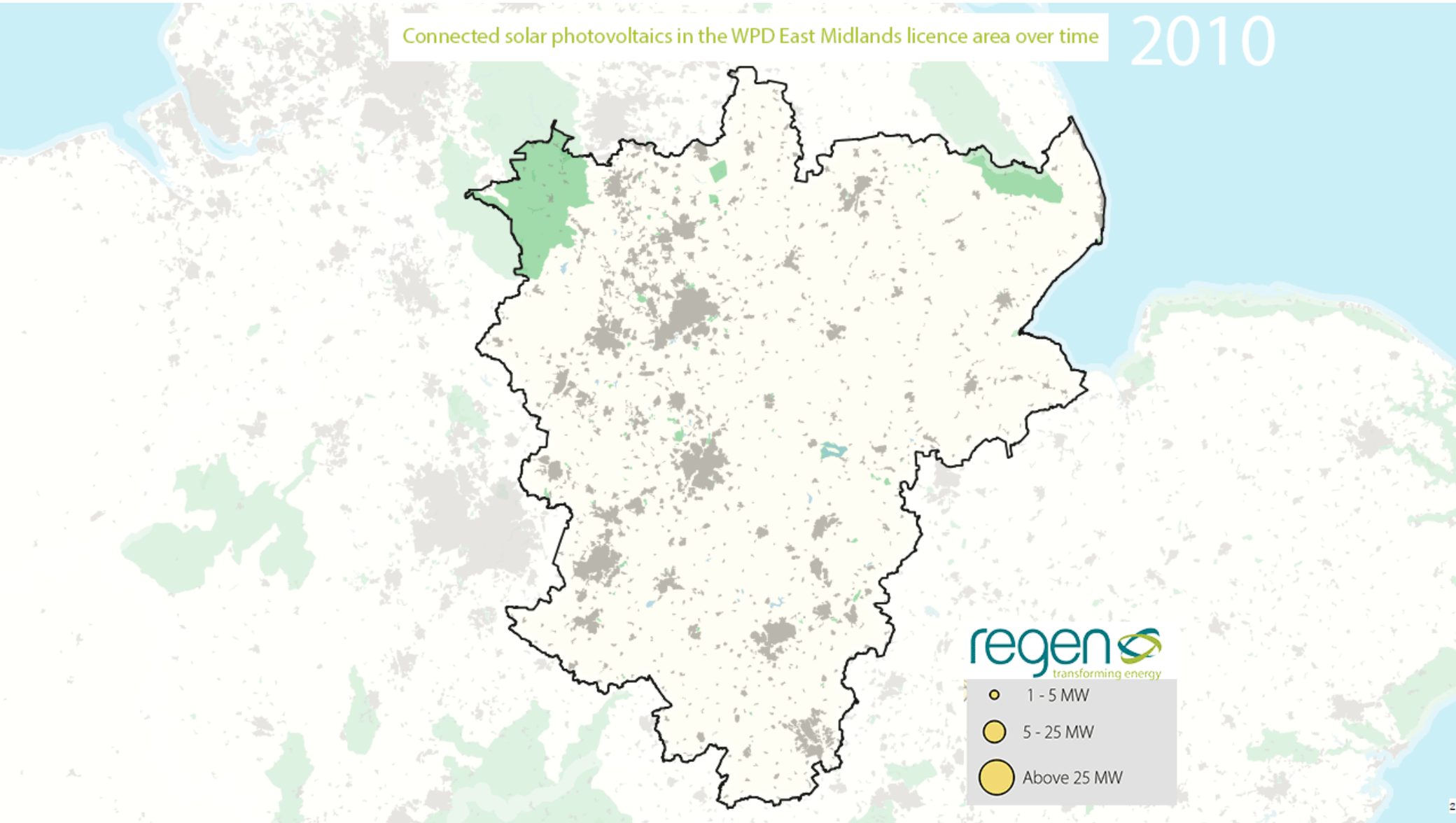


Ground mounted solar

Ground mounted solar

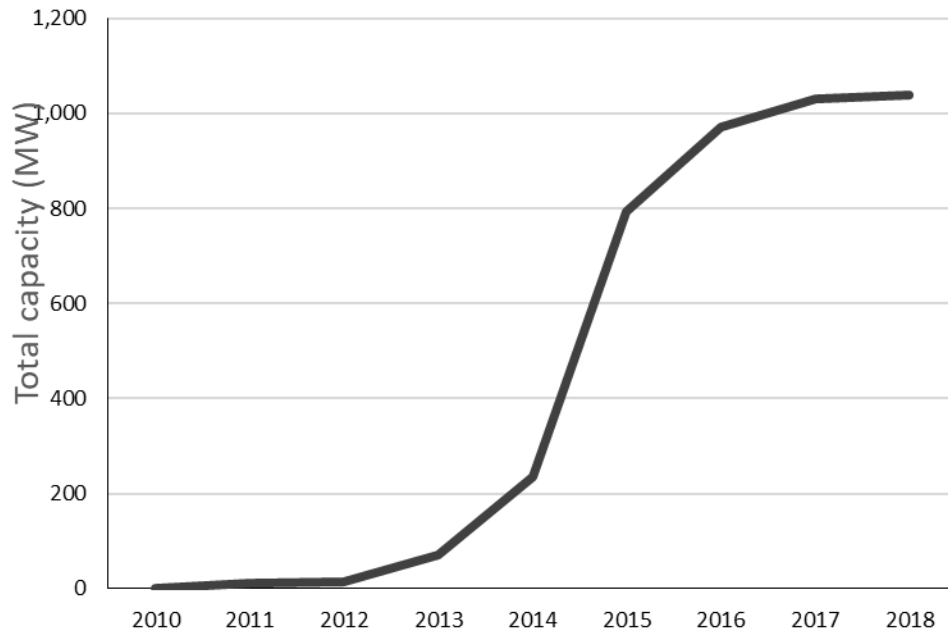
Connected solar photovoltaics in the WPD East Midlands licence area over time

2010

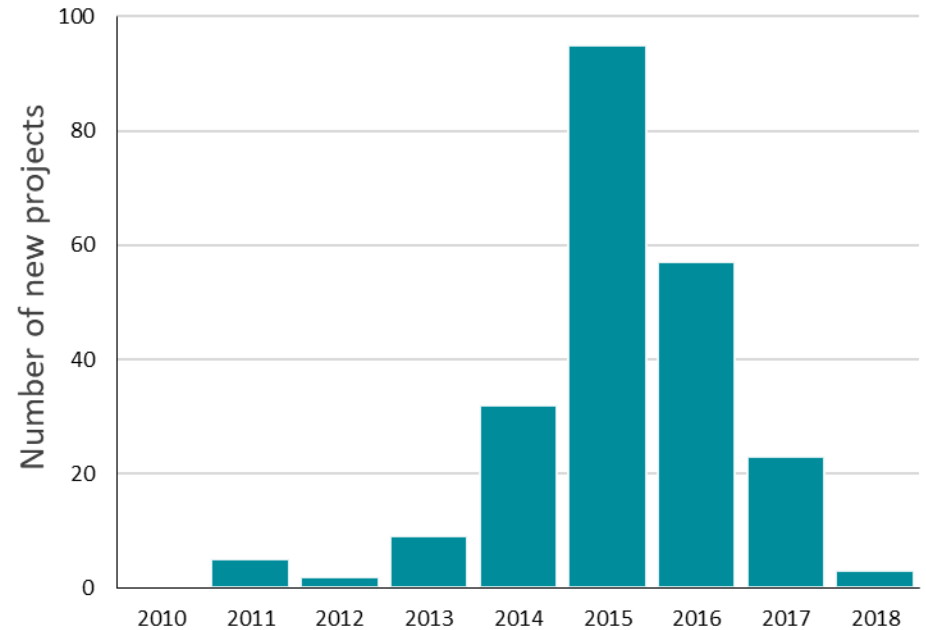


Ground mounted solar

Distribution network connected ground mount solar PV capacity in WPD East Midlands licence area



Number of distribution network connected ground mount solar PV projects per year in WPD East Midlands licence area



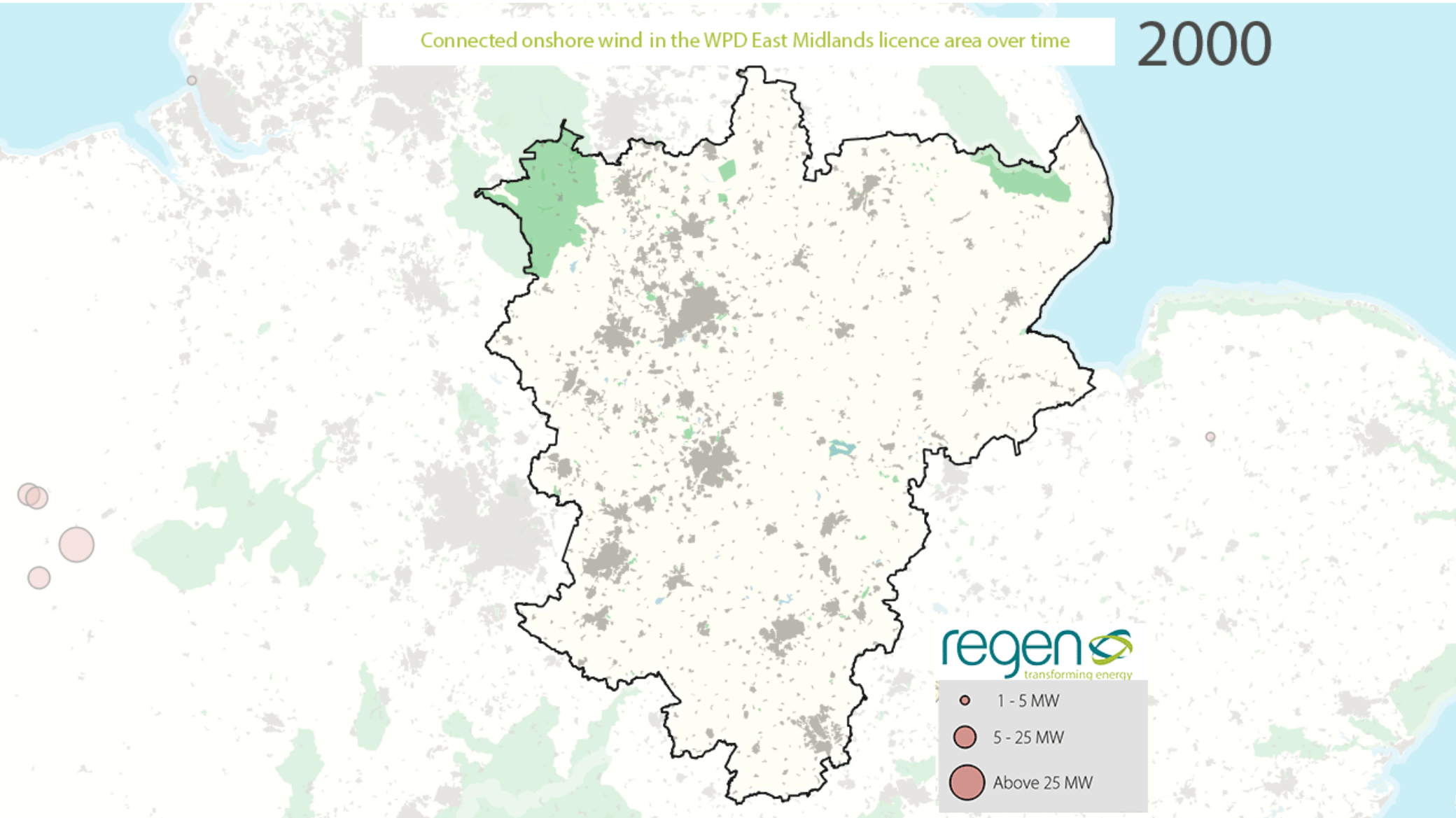


Onshore wind

Onshore wind

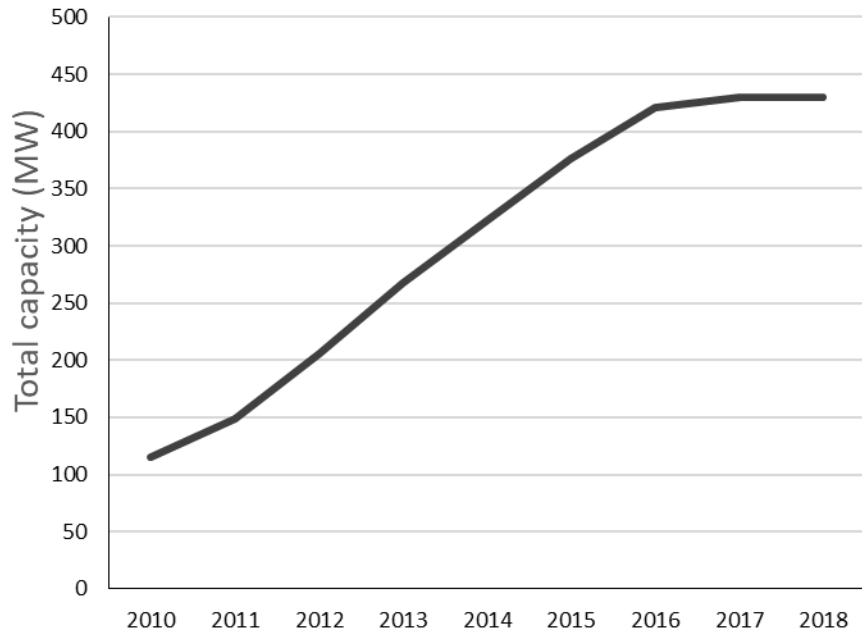
Connected onshore wind in the WPD East Midlands licence area over time

2000

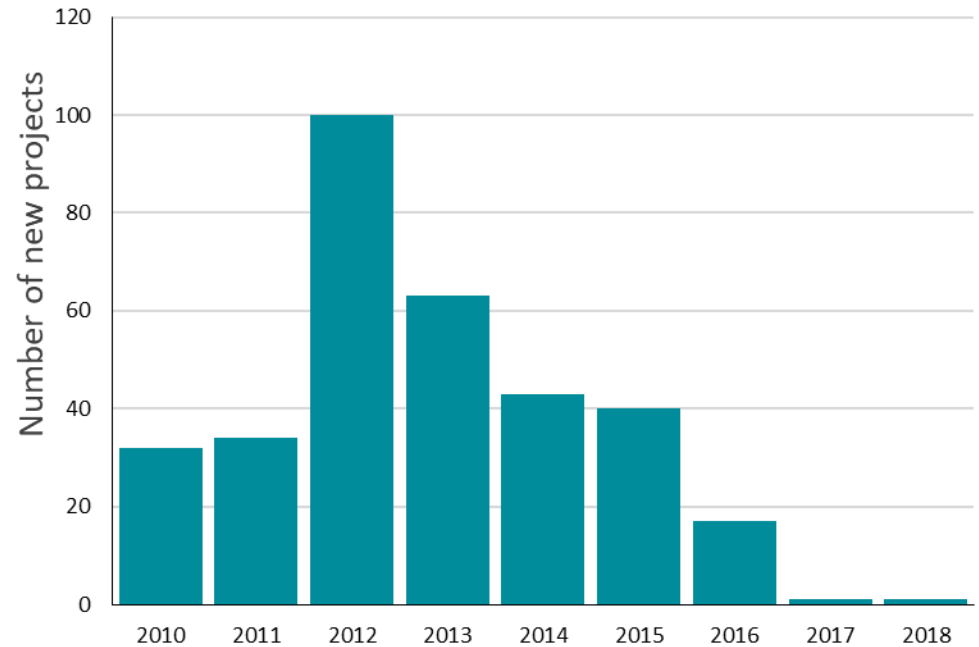


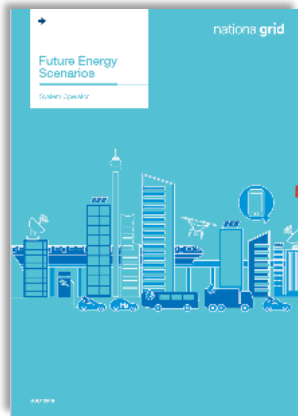
Onshore wind

Distribution network connected wind capacity in WPD East Midlands licence area



Number of distribution network connected onshore wind projects per year in WPD East Midlands licence area





Projected and assessed through a combination of FES 2018 scenarios and our Regen model

Range of vehicle types

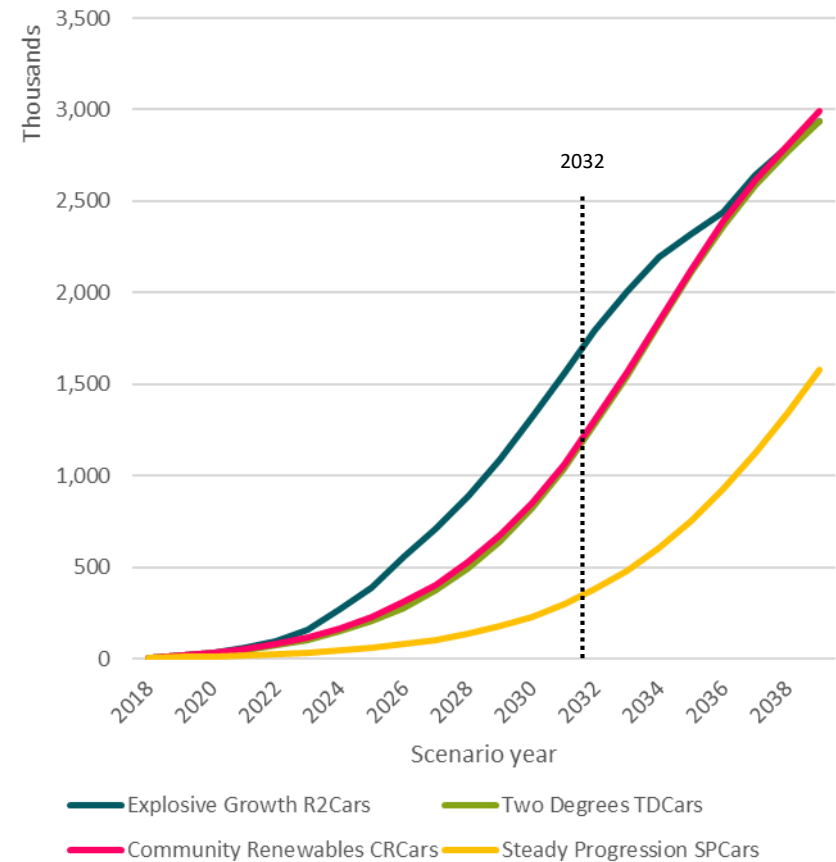
Cars	PEVs
	PHEVs
LGVs	PEVs
	PHEVs
HGVs	
Buses and coaches	
Motorcycles	

Electric vehicles: results

Preliminary results for Battery-electric cars

Scenario	Baseline	2025	2032
Community Renewables	5,500	229,000	1,302,000
Two Degrees		205,000	1,282,000
Consumer Power		57,500	364,000
Steady Progression		59,000	379,000
Regen 'Explosive' growth		388,500	364,000

Growth of Battery electric cars in the WPD East Midlands licence area
Preliminary results



Spatial distribution:

Our weightings include:

- Availability of off-street / on-street parking
- Current distribution of vehicle types
- Commercial properties
- Distribution of multi-car households
- Car park distribution
- Depots, distribution centres

Range of vehicle types

Cars	PEVs
	PHEVs
LGVs	PEVs
	PHEVs
HGVs	
Buses and coaches	
Motorcycles	

Heat pumps: overview

Installation type:

Domestic
(on-gas grid)

Domestic
(off-gas properties)

New homes
(building on the new
developments studies)

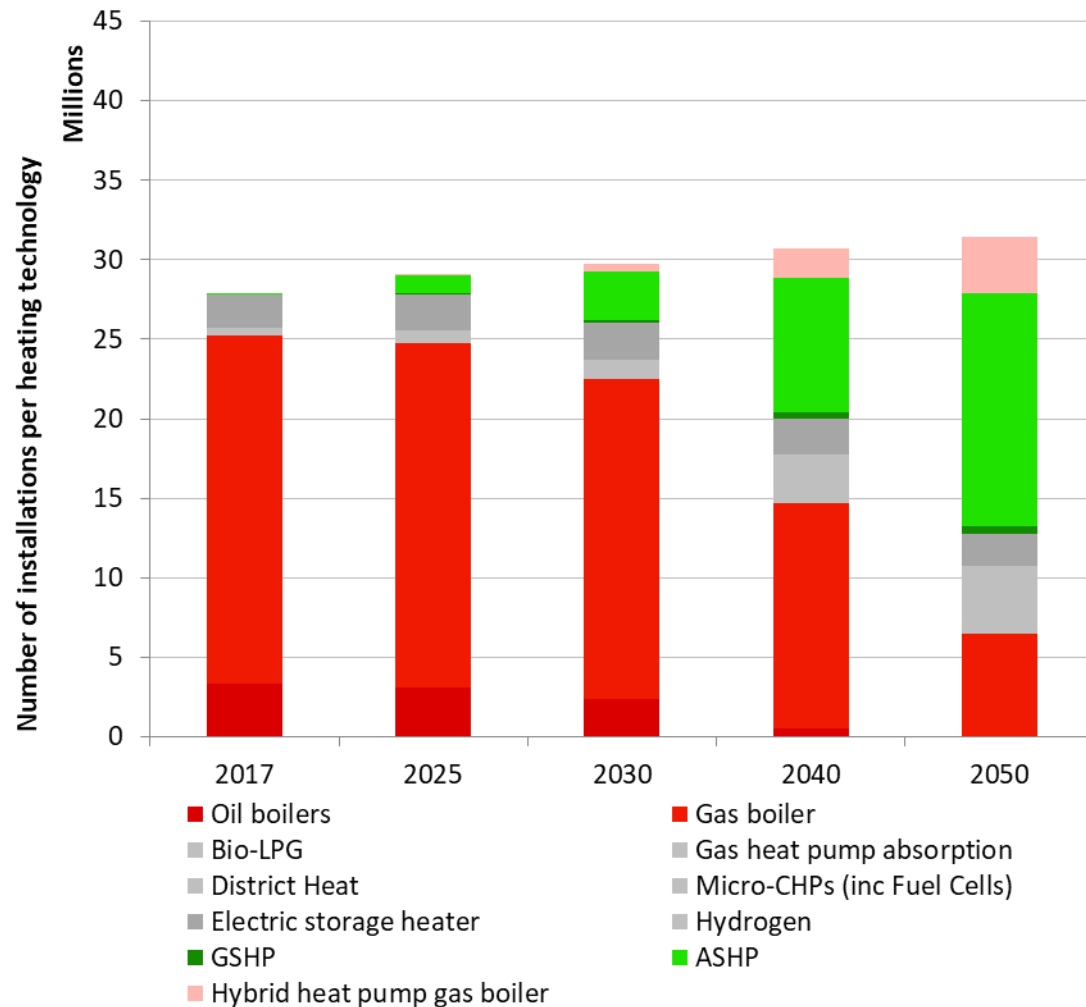
Technology type:

Single heat pump system
(i.e. electric back-up)

Hybrid heat pump
(i.e. gas back-up)

Domestic heat technologies under Community Renewables

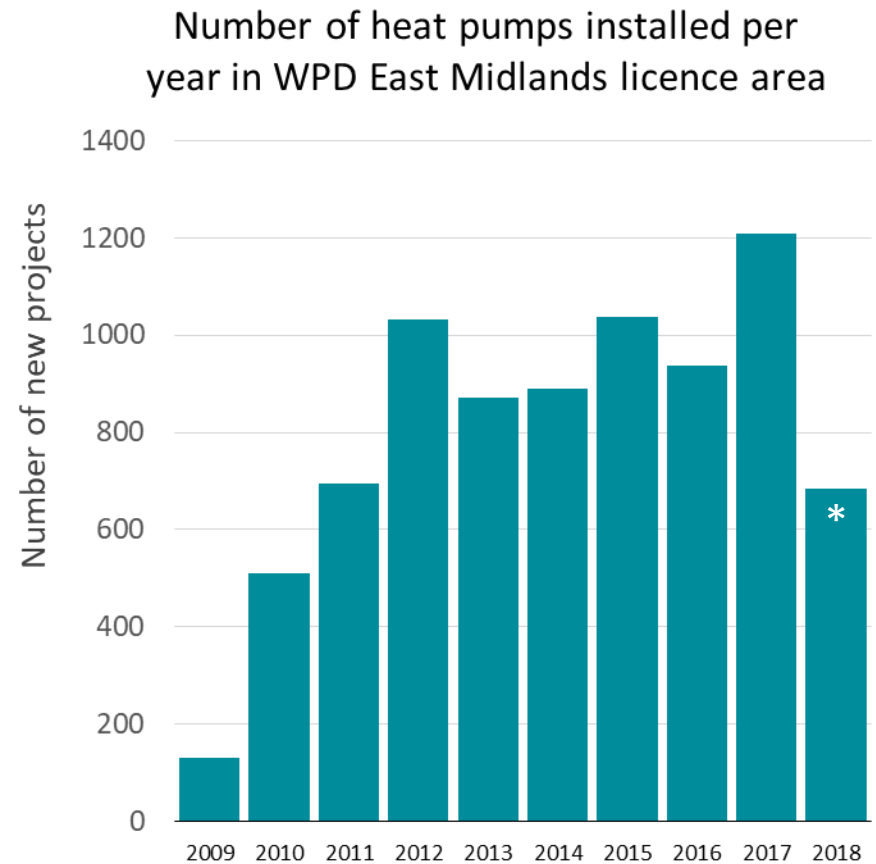
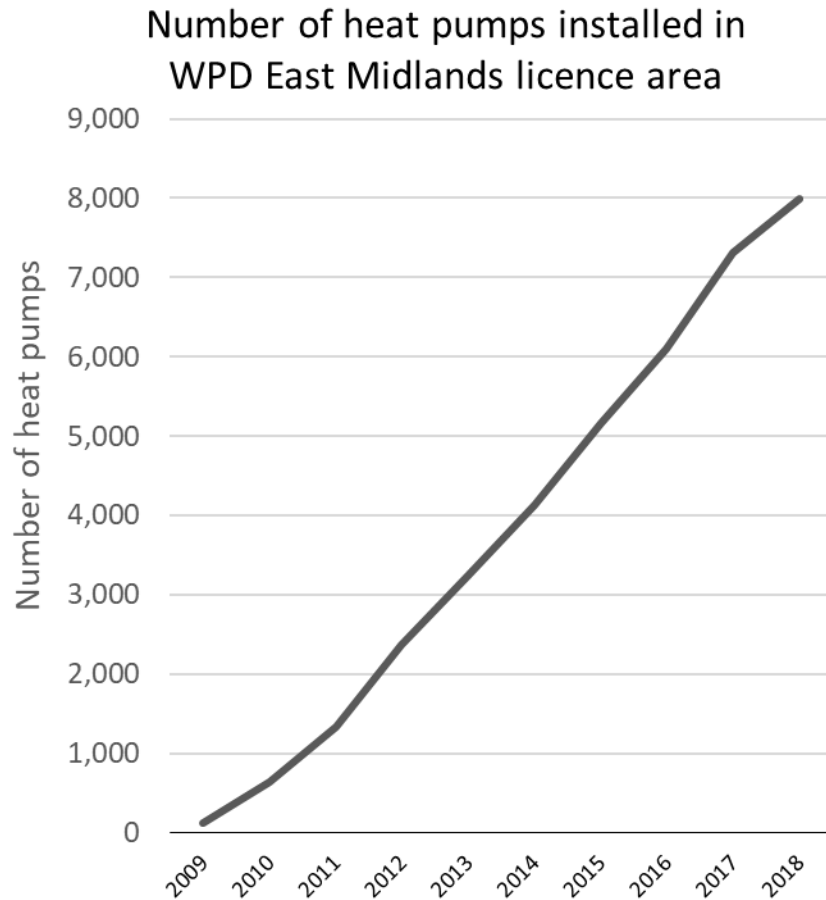
source: FES 2018



Heat pumps: results

Our growth factors include:

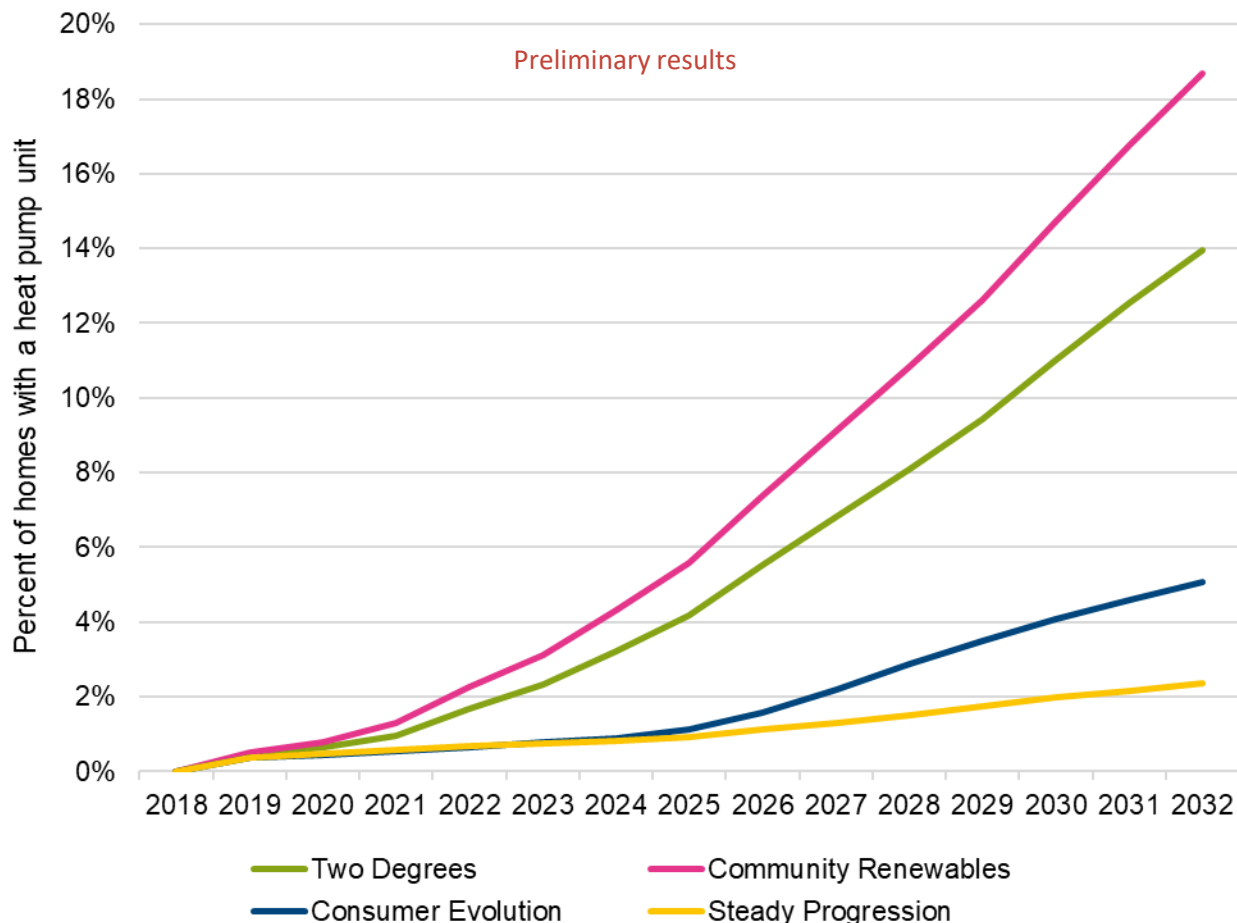
Government regulation on domestic heating with priorities varying for on-gas and off-gas properties, building regulations, subsidy, cost reductions, economic growth, new home developments



* Data complete until mid 2018

Heat pumps: projections

Scenario projections for percent of all homes with heat pumps in WPD East Midlands licence area



Our spatial distribution weightings include:

- Assessment of the current baseline and distribution
- Distribution of on-gas, off-gas homes
- Flats and high rise buildings
- New properties building from the new developments study



Sources of data

Baseline includes:

- WPD connection data
- Ordnance survey data
- Department for Transport EV statistics
- FIT data, ROC data etc.

Pipeline includes:

- Grid connection agreements for large scale technologies
- Projects in the planning system
- Local plans for residential and non-residential projections with data validation
- Data validation with local authorities

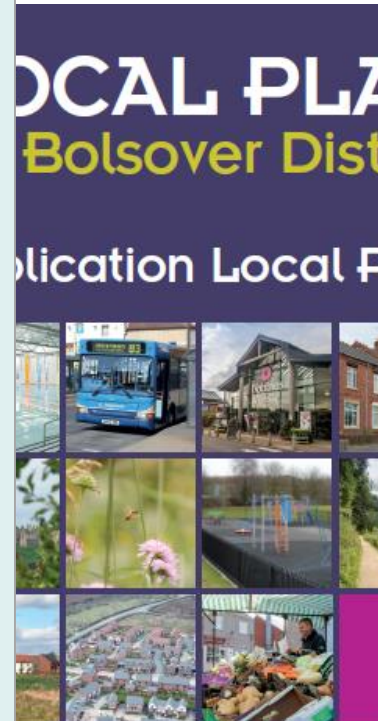
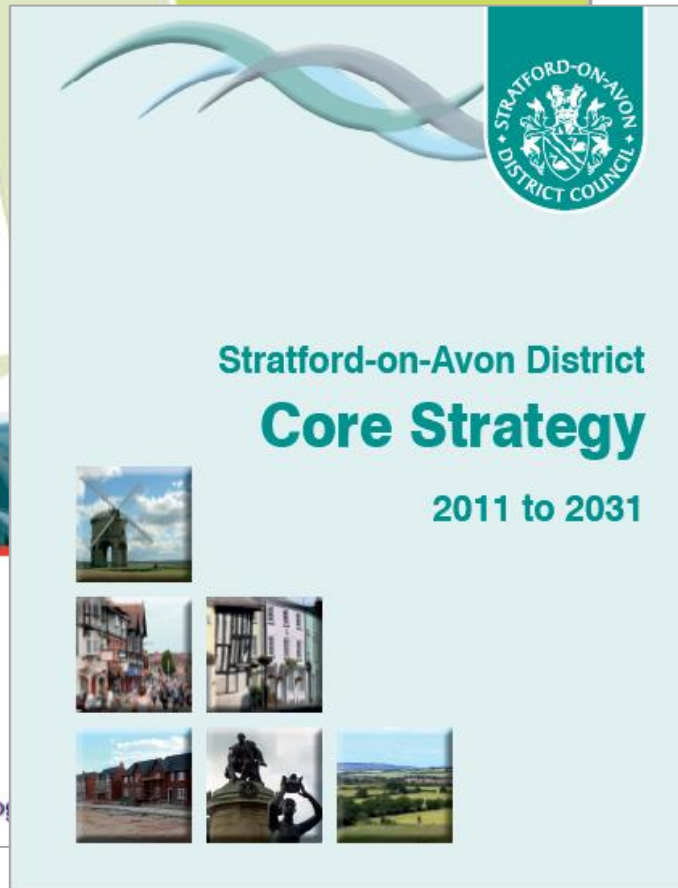
NEW DEVELOPMENT STUDY

POPPY MALTBY, REGEN



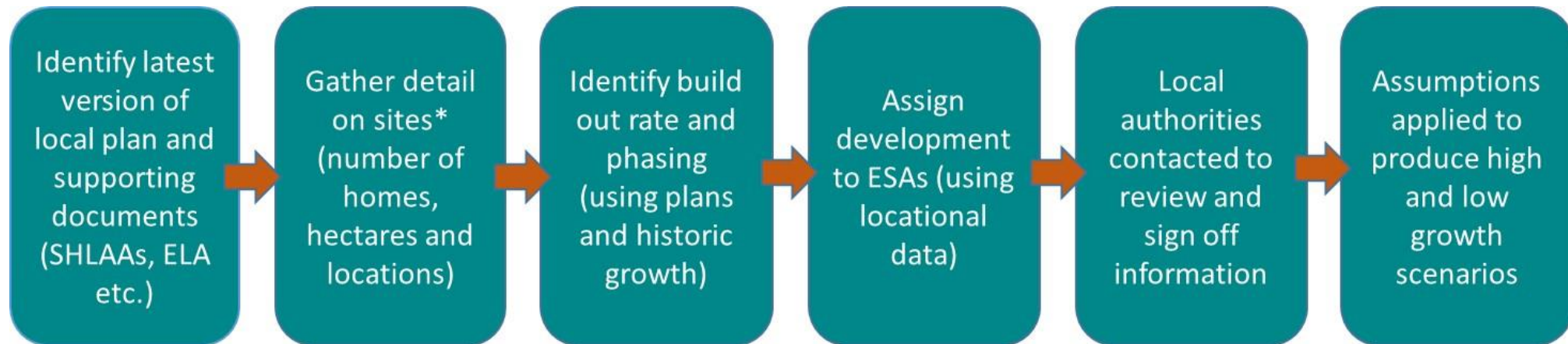


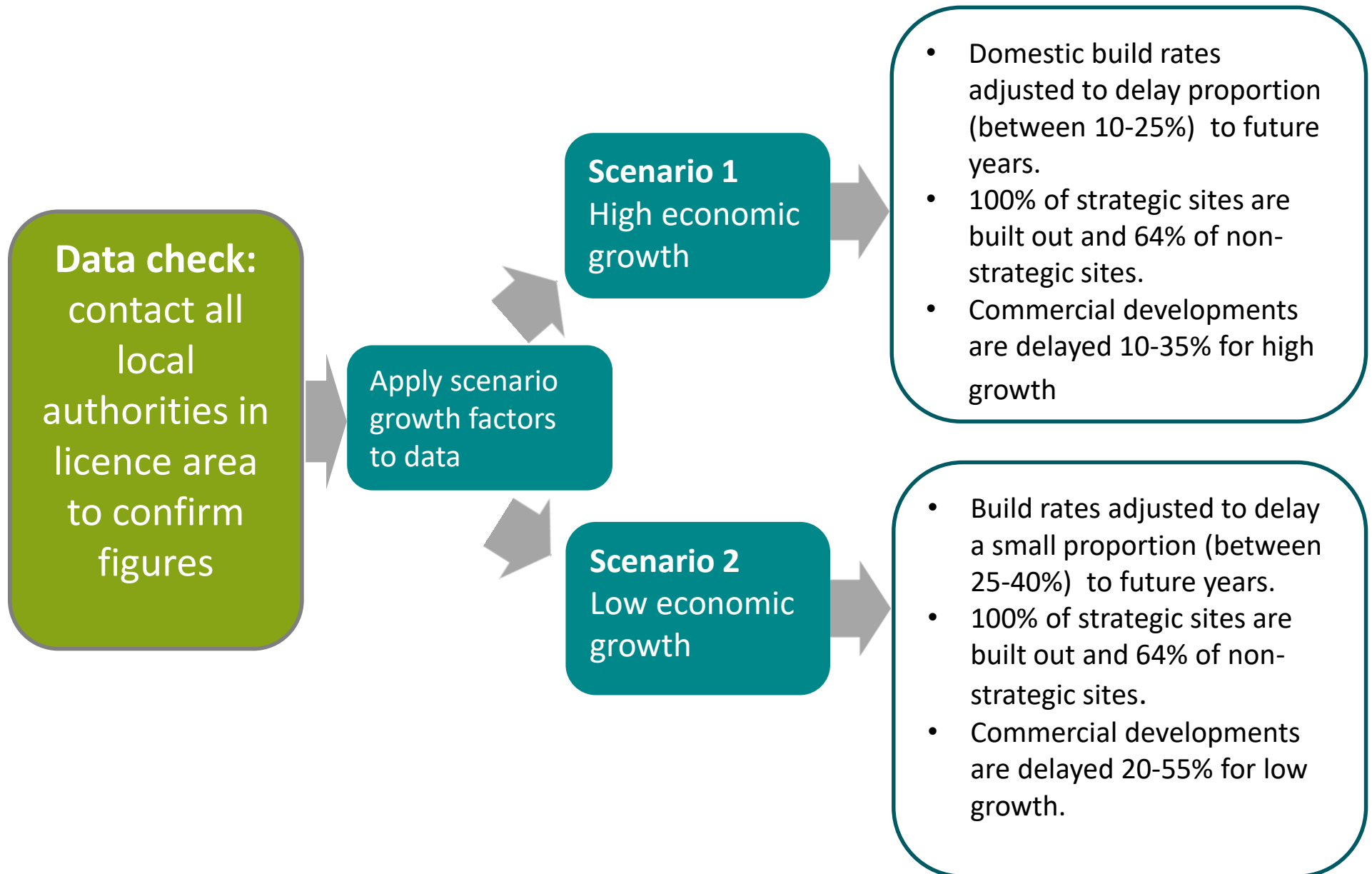
- Local plans and core strategies
- Annual monitoring reports
- Employment and housing land availability assessments
- Housing trajectories
- Infrastructure development plans



Analysis of both domestic and new commercial developments

* Domestic sites with 5 dwellings or over





Final dataset

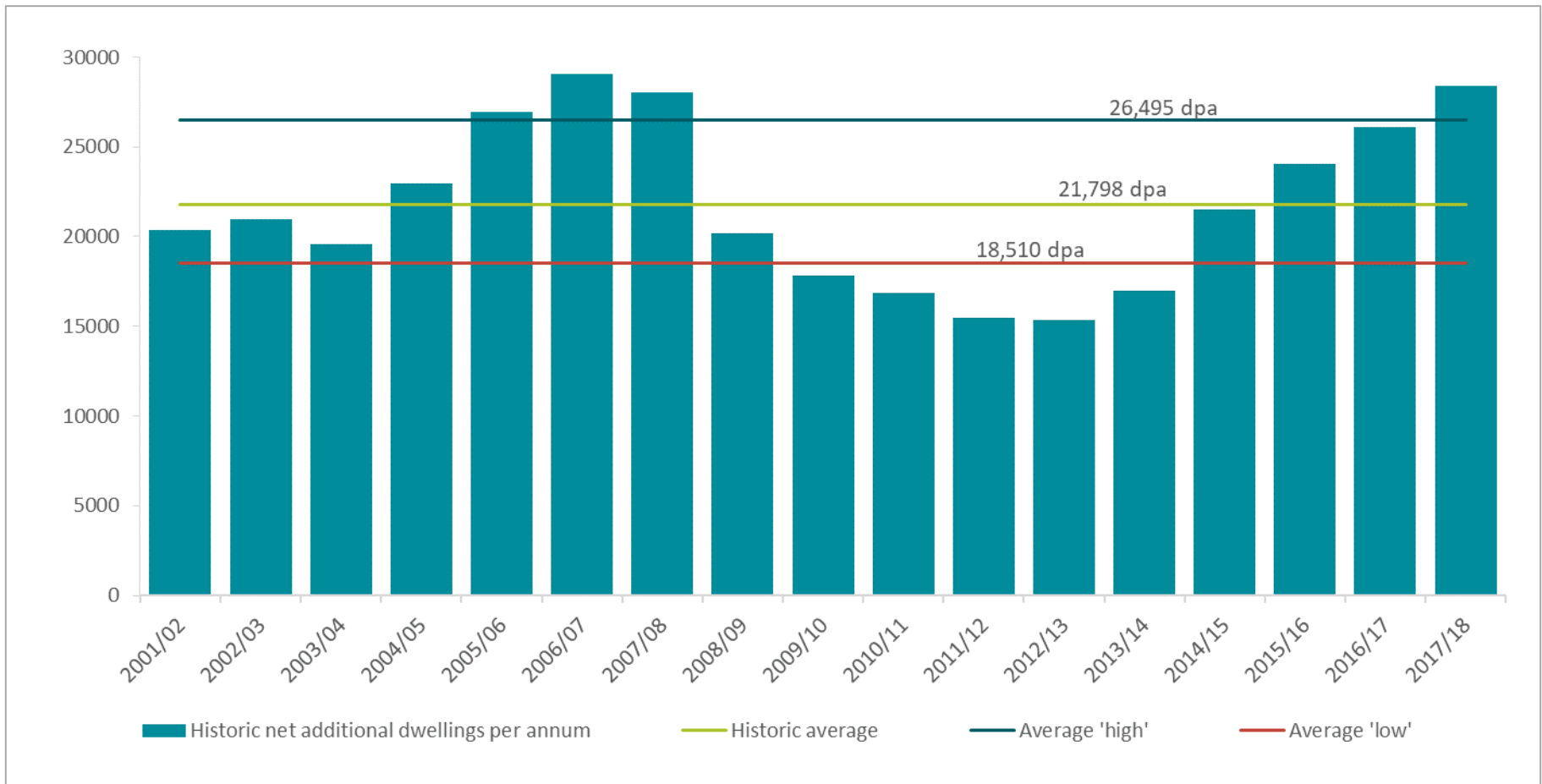
CHECK COLUMN	SPSS 2018/19	SPSS 2019/20	SPSS 2020/21	SPSS 2021/22	SPSS 2022/23	SPSS 2023/24	SPSS 2024/25	SPSS 2025/26	SPSS 2026/27	SPSS 2027/28	SPSS 2028/29	SPSS 2029/30	SPSS 2030/31	SPSS 2031/32	SPSS 2032/33	SPSS 2033/34
0	0	116.25	135	156.75	150.25	148	160.95	171.9	176.75	162.8	189	210.08	213.6	217.21	199.98	
0	175	187.5	187.5	187.5	200	200	225	225	227.5	215	250	272.5	272.5	160	115	73.5
0	0	0	37.5	112.5	150	197.5	207.5	225	248	248	300	327	336	162	105	
0	0	37.5	150	187.5	190	177.5	200	220	227.5	215	250	272.5	280	135	87.5	
0	0	0	37.5	150	187.5	165	177.5	200	222.5	215	250	272.5	280	285	112.5	
0	0	0	0	45	105	130	133	143	162	166	200	218	224	228	210	
0	0	82.5	82.5	82.5	88	171.2	182.2	182.2	190.98	191.88	238	259.42	265.96	270.62	106.93	
0	0	0	30	30	60	80	123	129	149.2	150.8	197.6	225.6	233.8	243.6	228.4	
0	0	45	90	90	153	142	154	164	174	172	200	218	224	228	210	
0	115	142.5	142.5	142.5	152	152	171	171	172.9	163.4	190	207.1	212.8	102.6	66.5	
0	125	112.5	112.5	112.5	120	136.25	167.5	167.5	170.5	164.5	196.5	217.5	223.25	108	70	
0	162	123.75	123	143.25	167.25	157.95	159.45	163.1	159.2	130.5	166.5	190.24	184.35	85.76	56.38	
0	0	0	0	168.75	168.75	146.25	157.5	180	204.75	193.5	225	245.25	252	121.5	78.75	
0	0	18.75	56.25	112.5	113.75	103.75	115	127.5	136.5	129	150	163.5	168	171	157.5	
0	100	75	75	75	80	112.5	122.5	122.5	126.5	124	150	163.5	168	171	157.5	
Development name	Development code?	Local authority	EE	Allocation type	Number of homes in projection period (2018-2035)		Development plan stage	Source document	Stage of planning	Link to information	Start of plan period	End of plan period	Plan per			
South East Coalville		North West Leicestershire		Strategic		3014				Local email att	2018	2031				
Wellingborough East Sustainable Urban Extension		Wellingborough		Strategic		2375	Published	Local plan		http://wellingbo	2011	2031				
West Corby		Corby		Strategic		2800		AMR	Pre-planning - available for development	http://www.nrip	2016	2031				
Land south of Clifton		Rushcliffe		Strategic		2750	Published	Local plan		https://www.nrip	2017	2028				
East of Gamston/North of Tollerton		Rushcliffe		Strategic		2750	Published	Local plan		https://www.rus	2017	2028				
Daventry North East		Daventry		Strategic		2600	Draft	Local plan		https://www.dav	2018	2023				
Brantson Locks (Lawns Farm)		East Staffordshire		Strategic		2580		5-Year land sup	Under construction	http://www.east	2018	2023				
South East Quadrant, Canwick Heath		North Kesteven		Strategic		2580		5-Year land supply		https://www.we	2018	2023				
Barwell SUE		Hinckley and Bosworth		Strategic		2500		Residential Land Availability Monitoring Statement		https://www.hin	2018	2026				
Rugby Radio Station		Rugby		Not allocated, cc		2395	Draft	Local Plan		https://www.rug	2016	2031				
Gayden Lighthorne Heath		Stratford-on-Avon		Strategic		2300	Adopted	Core Strategy		https://www.stra	2011	2031				
Suburbs		Leicester		General allocatic		2253		SHLAA/HELAA		https://www.leic	2016	2031				
Eastern Green SUE, Baklake		Coventry		Strategic		2250		SHLAA/HELAA		http://www.cov	2015	2030				
Western Growth Corridor		Lincoln		Strategic		2200		5-Year land supply		https://www.we	2018	2023				
Holland Park, Spalding		South Holland		Strategic		2197		5-Year land sup	Under construction	http://www.sout	2018	2023				
Stamford allocations		South Kesteven		General allocatic		2081	Draft	Local plan	Pre-planning - available for development	http://www.sout	2018	2036				
Stanton regeneration site		Erewash		Strategic		2000	Adopted	Core Strategy		https://www.ere	2011	2028				
Ashton Green		Leicester		Strategic		1980		SHLAA/HELAA		https://www.leic	2016	2031				
North East of Leicester SUE		Charnwood		Strategic		1970		AMR	Planning permission granted	Unpublished dr.	2018	2028				
Land to east of Polesworth & Dordon		North Warwickshire		Strategic		1969	Published	Local plan		https://www.nor	2011	2032				
Ilkeston urban area (not including Stanton)		Erewash		Strategic		1967	Adopted	Core Strategy		https://www.ere	2011	2028				
Small Sites Allowance		Leicester		Unallocated (win		1950		SHLAA/HELAA		https://www.leic	2016	2031				
Rushden East SUE (High Hayden Farm etc), Rushden		East Northamptonshire		Strategic		1900	Published	5-Year land sup	In planning	https://www.eai	2018	2031				
CAMPBELL PARK		Milton Keynes		Strategic		1880		5-Year land sup		https://www.mkt	2018	2023				
Loughborough/Shepshed		Charnwood		General allocatic		1876		AMR	Planning permission granted	Unpublished dr.	2018	2028				
Money Hill Ashby de la Zouch		North West Leicestershire		Strategic		1848			Under construction	Local email att	2018	2031				
Land at Kings Hill Lane	H43	Warwick		Strategic		1800		5-Year land supply		https://www.warwickdc.gov.uk/info/20376/planni	2011	2036				
Windfall		Nottingham		Unallocated (win		1785		5-Year land sup	Pre-planning - available for development	https://www.not	2018	2028				
Service Centres		Charnwood		General allocatic		1728		AMR	Planning permission granted	Unpublished dr.	2018	2028				
Earl Shilton SUE		Hinckley and Bosworth		Strategic		1600		Residential Land Availability Monitoring Statement		https://www.hin	2018	2026				
South Melton Sustainable Neighbourhood		Melton		Strategic		1590	Adopted	Local plan		https://docs.wi	2011	2036				

INITIAL FINDINGS



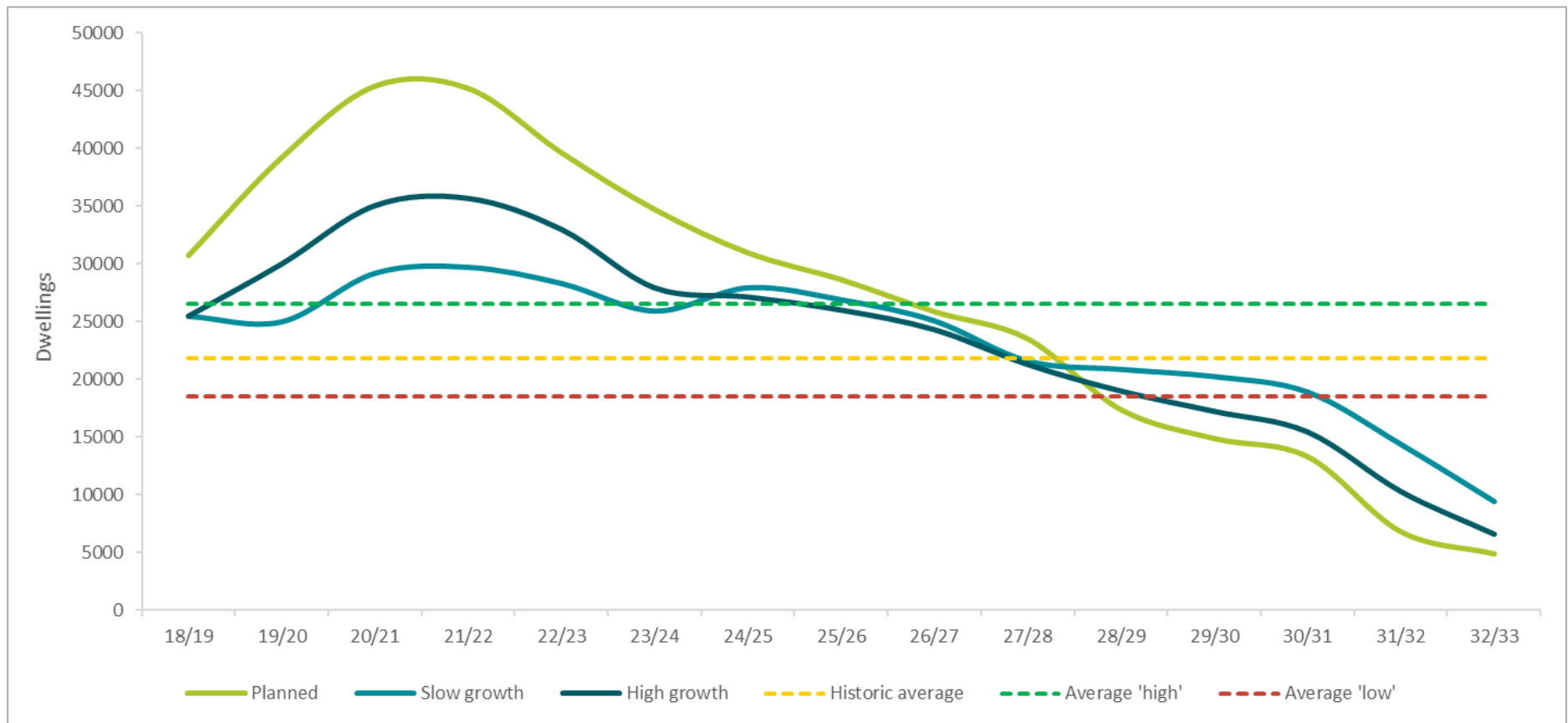
Historic dwellings per annum

High average: 26,495 Total average: 21,798 Low average: 18,510



Domestic projections through to 2032

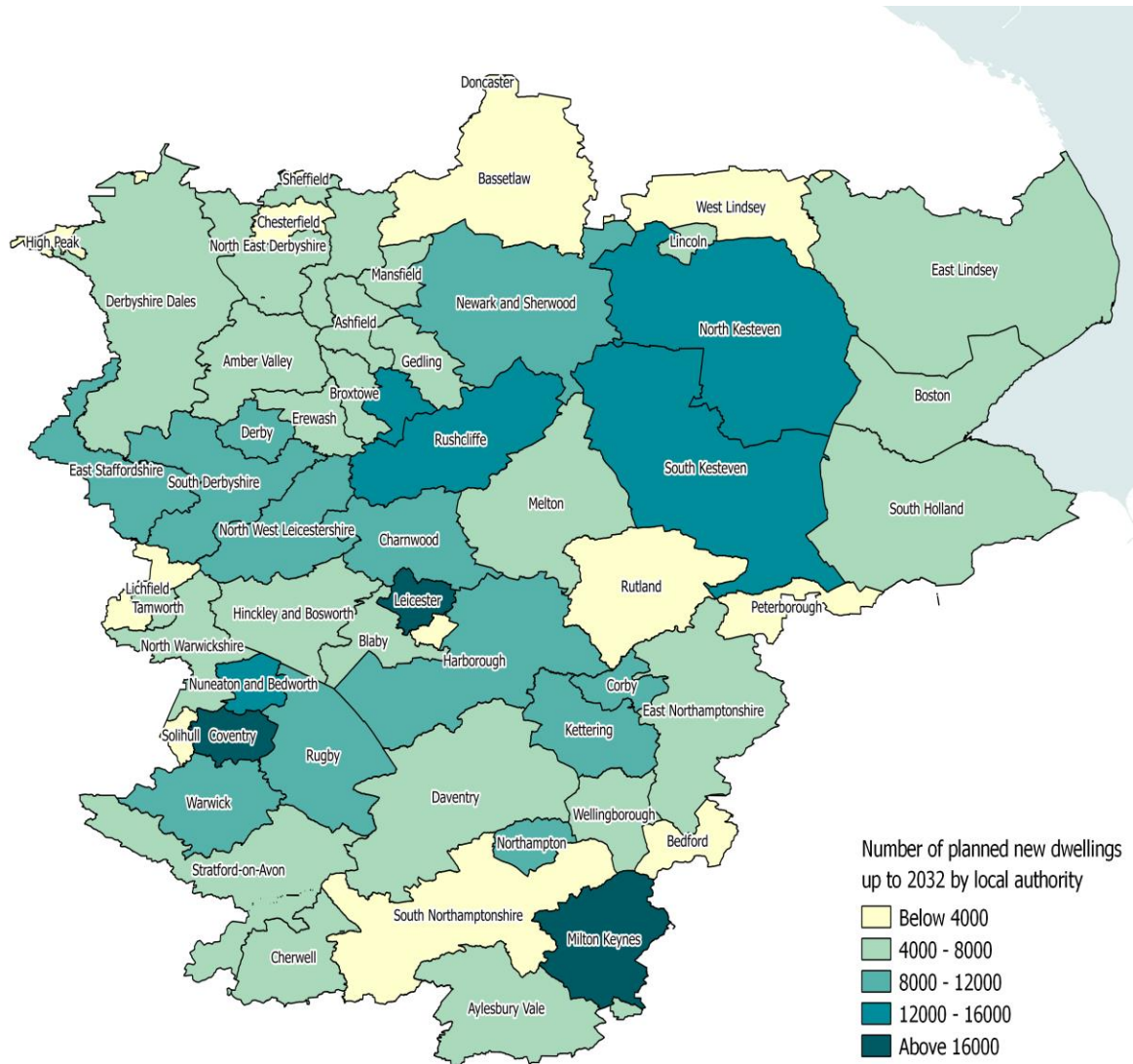
Draft projections to be used for network analysis.
Existing plans considerably higher than long term averages.
Reduce towards the end of the period due to planning timelines.



Top 20 sites - housing

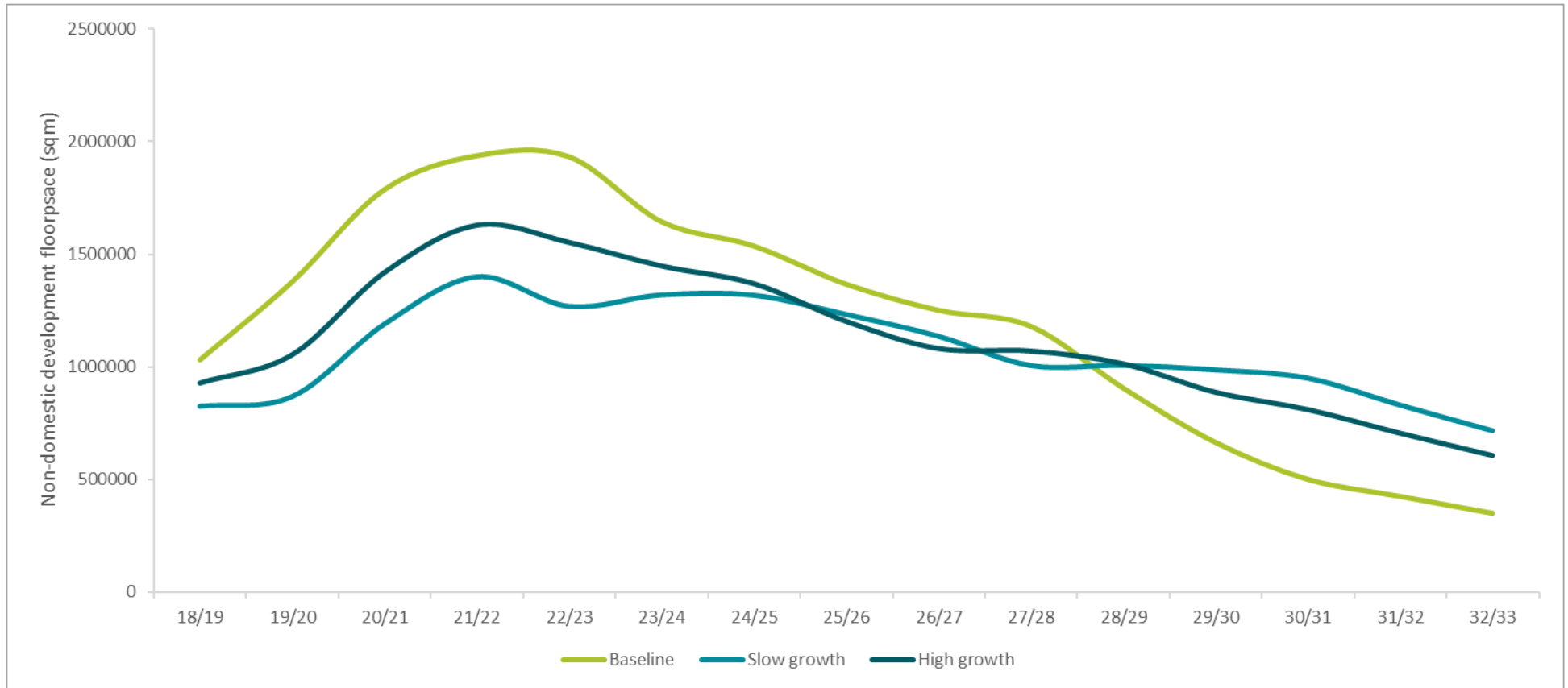
Development name	Local authority	Number of homes in projection period (2018-2035)	Development plan stage	Source document	Published, submitted or adopted date
Strategic Regeneration Area	Leicester	7843		SHLAA/HELAA	01/03/2016
Western Expansion Area	Milton Keynes	5472		5-Year land supply	01/04/2018
Lubbesthorpe Application	Blaby	4150		5-Year land supply	31/03/2018
Urban area (Arnold and Carlton)	Gedling	3698	Adopted	Local plan	18/07/2018
Kettering East	Kettering	3480		AMR	01/05/2018
Priors Halls Park	Corby	3133		AMR	01/04/2017
Keresley SUE, Bablake	Coventry	3100		SHLAA/HELAA	01/01/2016
South East Coalville	North West Leicestershire	3014			01/04/2018
Wellingborough East Sustainable Urban Extension	Wellingborough	2975	Published	Local plan	20/09/2017
West Corby	Corby	2800		AMR	01/04/2017
Land south of Clifton	Rushcliffe	2750	Published	Local plan	01/05/2018
East of Gamston/North of Tollerton	Rushcliffe	2750	Published	Local plan	01/05/2018
Daventry North East	Daventry	2600	Draft	Local plan	05/10/2018
Branston Locks (Lawns Farm)	East Staffordshire	2580		5-Year land supply	19/07/2018
South East Quadrant, Canwick Heath	North Kesteven	2580		5-Year land supply	01/04/2018
Barwell SUE	Hinckley and Bosworth	2500		Residential Land Availability Monitoring Statement	01/04/2018
Rugby Radio Station	Rugby	2395	Draft	Local Plan	01/09/2016
Gayden Lighthorne Heath	Stratford-on-Avon	2300	Adopted	Core Strategy	11/07/2016
Eastern Green SUE, Baklake	Coventry	2250		SHLAA/HELAA	01/01/2016
Western Growth Corridor	Lincoln	2200		5-Year land supply	01/04/2018

New builds – domestic



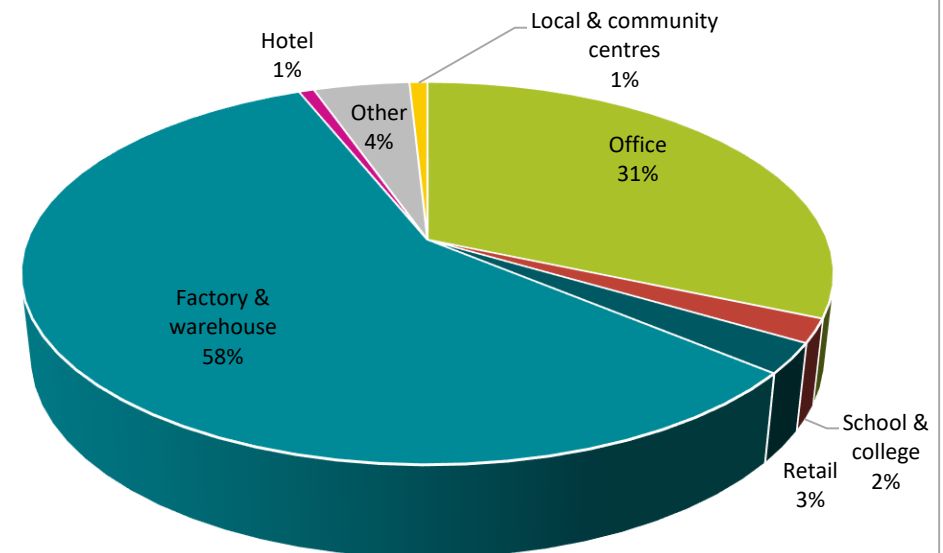
Local Authority	Total homes number of homes to 2035
Milton Keynes	23109
Coventry	16361
Leicester	16323
Rushcliffe	14204
North Kesteven	14079
Nottingham	13899
South Kesteven	13579
Nuneaton and Bedworth	12485
Warwick	11429
South Derbyshire	10733

Non-domestic developments

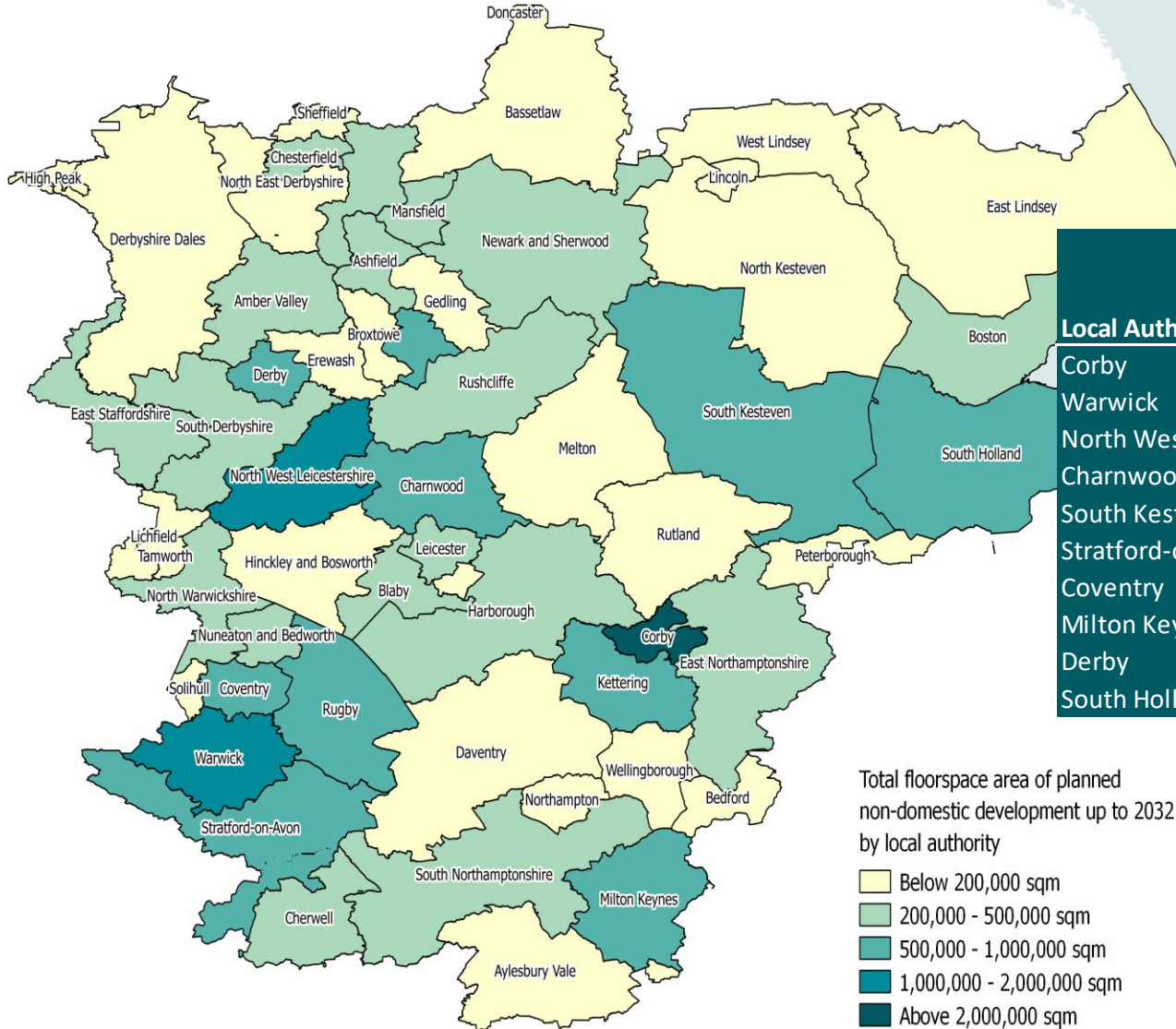


Top 20 sites – non-domestic

Development name	Local authority	Total site area m ²	Total floorspace m ²	Category	Development plan stage	Source document	Published, submitted or adopted date
Land at Geddington Road, Corby	Corby	1437000	756316	Factory and Warehouse	Published	ELR	20/05/2018
Strategic Rail Freight Interchange	North West Leicestershire	600000	557414	Factory and Warehouse			
Banbury Road, Gaydon	Stratford-on-Avon	1000000	526316	Factory and Warehouse		Other	30/11/2012
Land in vicinity of Coventry Airport	Warwick	1000000	526316	Factory and Warehouse	Adopted	Local plan	2017
Land in vicinity of Coventry Airport	Warwick	1000000	454545	Office	Adopted	Local plan	2017
Midlands Logistics Park (formerly Stanion Lane Plantation)	Corby	953000	381200	Other	Published	ELR	20/05/2018
Land South of Newark	Newark and Sherwood	500000	263158	Factory and Warehouse	Published	Core Strategy	01/07/2017
Barn Close	Corby	420000	221053	Factory and Warehouse	Published	ELR	20/05/2018
Loughborough	Charnwood		216545	Office		SHLAA/HELAA	30/07/2018
Central Milton Keynes	Milton Keynes						
Land South of Milton Keynes	Milton Keynes						
Kettering South SUE	Kettering						
South West Rugby	Rugby						
Land South of Wilmore Road	Derby						
Rugby Gateway	Rugby						
North of Birchington Road	Corby						
Central Milton Keynes	Milton Keynes						
Land west of St Johns, Enderby	Blaby						
Land to the south of Horiba MIRA Technology Park & Enterprise Zone	North Warwickshire						
Derby Commercial Park	Derby						
Kettering North SUE	Kettering						



New builds – non-domestic



Local Authority	Total floorspace of non-domestic development to 2035 (m ²)
Corby	2426031
Warwick	1155176
North West Leicestershire	1142653
Charnwood	881177
South Kesteven	820625
Stratford-on-Avon	732331
Coventry	616549
Milton Keynes	609929
Derby	564587
South Holland	557425

Total floorspace area of planned non-domestic development up to 2032 by local authority

- Below 200,000 sqm
- 200,000 - 500,000 sqm
- 500,000 - 1,000,000 sqm
- 1,000,000 - 2,000,000 sqm
- Above 2,000,000 sqm

BREAK

regen 
transforming energy

1. **Electric Vehicles** – projections and growth in East Midlands
2. **Generation** – onshore wind, large solar PV and energy from waste
3. **WPD Flexible Power** – Distribution System Operator and what it means for customers.

- c. 30 min discussions
- 2 out of 3 sessions
- Short feedback at the end

FEEDBACK



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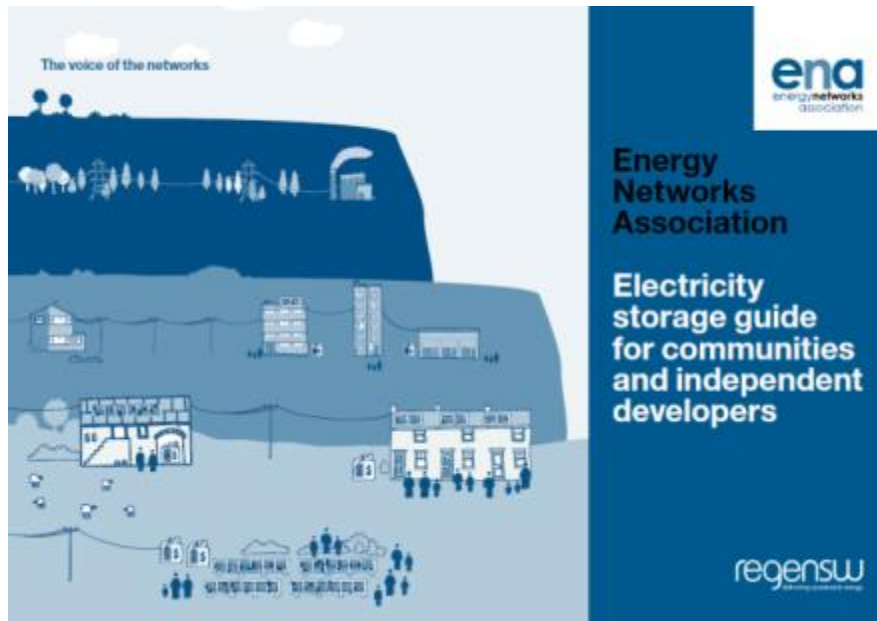


regensw

2016 edition

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The Voice of the Networks

ena
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association

Energy Networks Association

Distributed Generation Connection Guide

A GUIDE FOR CONNECTING GENERATION TO THE DISTRIBUTION NETWORK THAT FALLS UNDER G59/3 AND IS 50KW OR LESS 3-PHASE OR 17KW OR LESS SINGLE-PHASE

June 2014

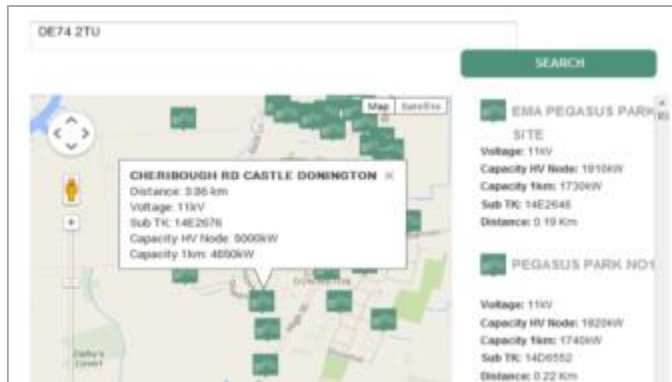
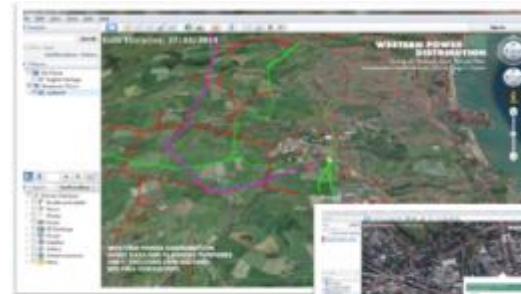
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Providing Greater Network Visibility

- WPD Web Map – linesearchbeforeyoudig.co.uk
- EHV Constraints Map
- Estimated Capacity Tool
- Connection Surgeries



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Providing Greater Network Visibility

- Network Capacity map
- Costing tool
- Apply online



Guide Prices

What are you looking for?

Select an option from our pricing tools, information and price guidance to help plan your development.



Pricing Tool

We have developed a basic costing guide to provide an indication of pricing and the timescales for obtaining a connection.

[Find out more](#)

Payment Terms

See what, when and how to pay for connection services.



[Find out more](#)



Interactive Costing Tool

The Interactive Costing Tool is designed to give an indicative cost for a new connection to help budget for your requirements.

[Find out more](#)

Apply for a connection online

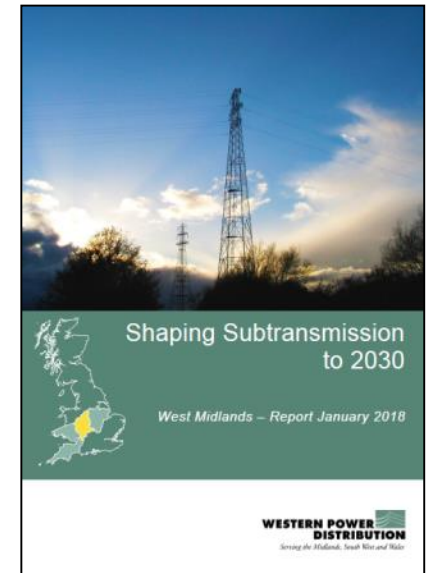
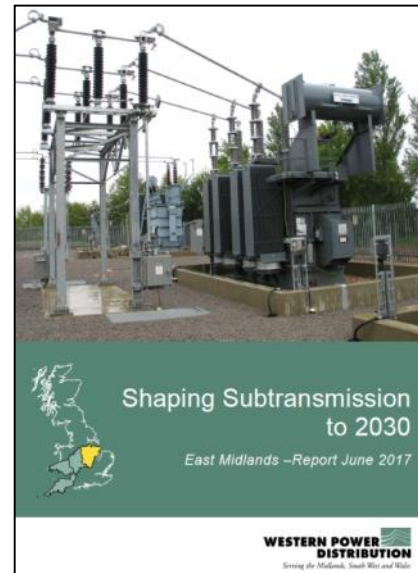
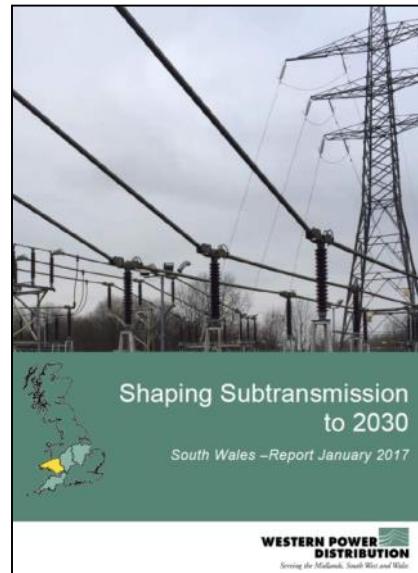
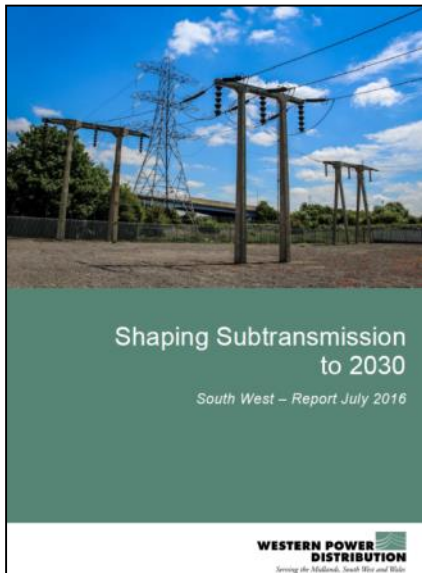
You will need:

- 10 minutes
- Your site plans

[Start Your Application](#)

IMPROVING DATA PROVISION

Every 6 months we publish a strategic investment study report on one of our four licence areas.



FURTHER COLLABORATION

All our reports, webinars and presentations are published online at:
<http://www.westernpower.co.uk/netstrat>

If you have any questions in relation to WPD's Network Strategy work, please contact WPD on the details below:

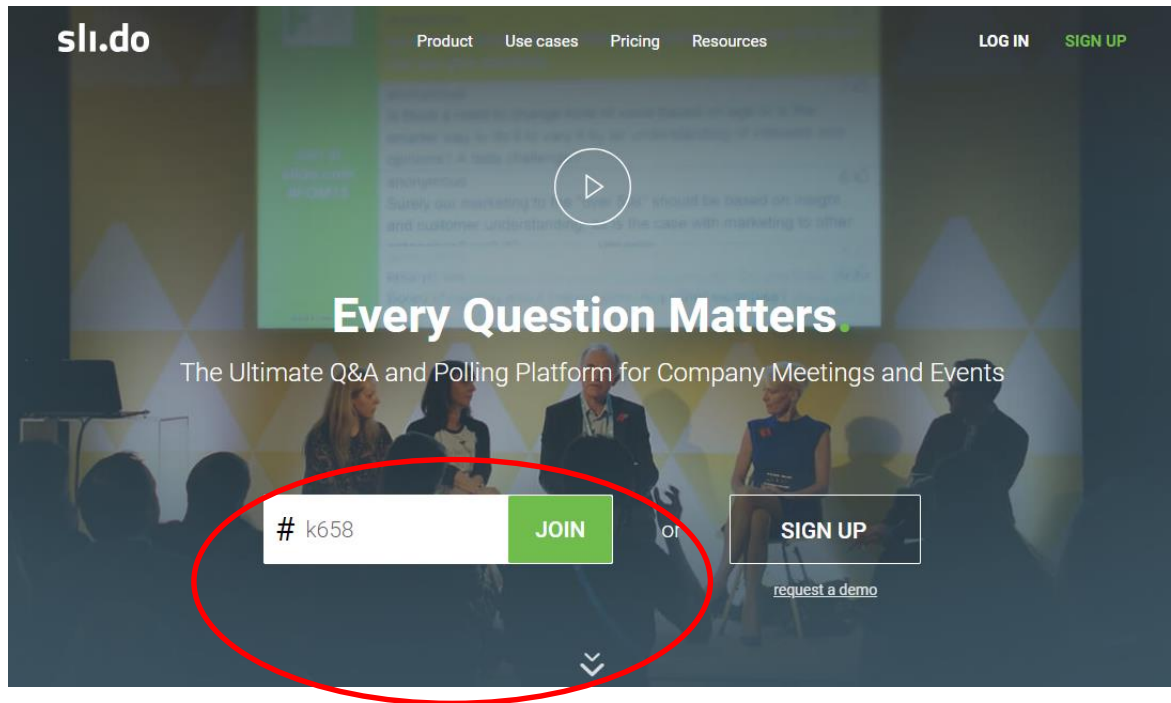
Email: wpdnetworkstrategy@westernpower.co.uk

By post:

Network Strategy Team
Western Power Distribution
Feeder Road
Bristol
BS2 0TB

How did we do?

Tell us on www.sli.do. Enter code **#WPD**





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