
Greater Manchester Low Carbon Hub

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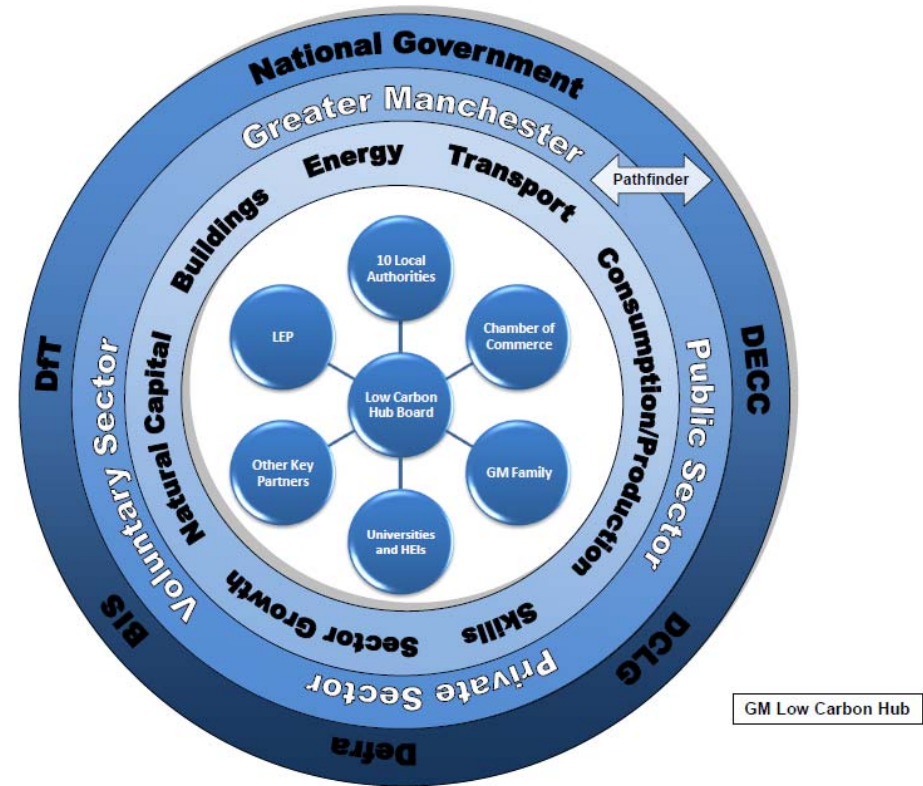
How is GM Pioneering ?

Developed :-

- ❖ Low Carbon Hub as a centre of excellence
- ❖ Joint Climate Change Implementation Plan
- ❖ Pathfinder Memorandum of Understanding (MoU) with DECC as 1 of 5 UK Pioneer Cities
- ❖ A strategy for Low Carbon work across government – developing MoU's with Defra, BIS and other
- ❖ 50 : 50 Joint Venture with GIB to :-
 - develop a pipeline of investable projects
 - design a vehicle to develop and deliver projects

Greater Manchester Low Carbon Hub

- ❖ A centre of excellence for achieving economic gain through the integrated delivery of carbon reduction.
- ❖ Harnesses the knowledge of our universities with the innovation of our businesses and strong public governance.



Key

Inner Hub – Environment Commission, Hub Board and Core Team

Radial – Existing partnerships and resources

Inner Ring – Existing and proposed thematic delivery groups

Mid Ring – Wider Greater Manchester Public, Private and Voluntary Sector

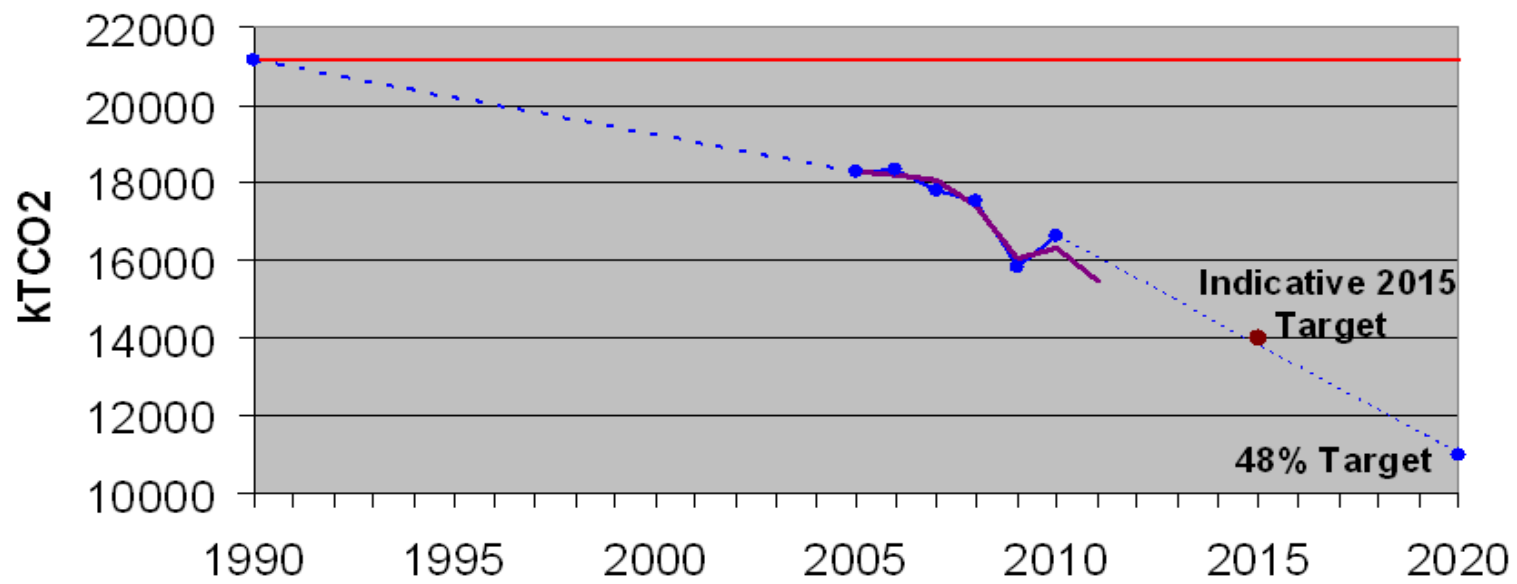
Outer Ring – Government Departments

Greater Manchester's Climate Change Implementation Plan 2012- 2015

- ❖ High level framework to steer GM to a low carbon future by 2020
- ❖ 4 headline objectives
 - CO2 emissions reduction – 48% on 1990 levels
 - Transition to low carbon economy
 - Adaptation to a changed climate
 - Culture change that embeds low carbon thinking in behaviour

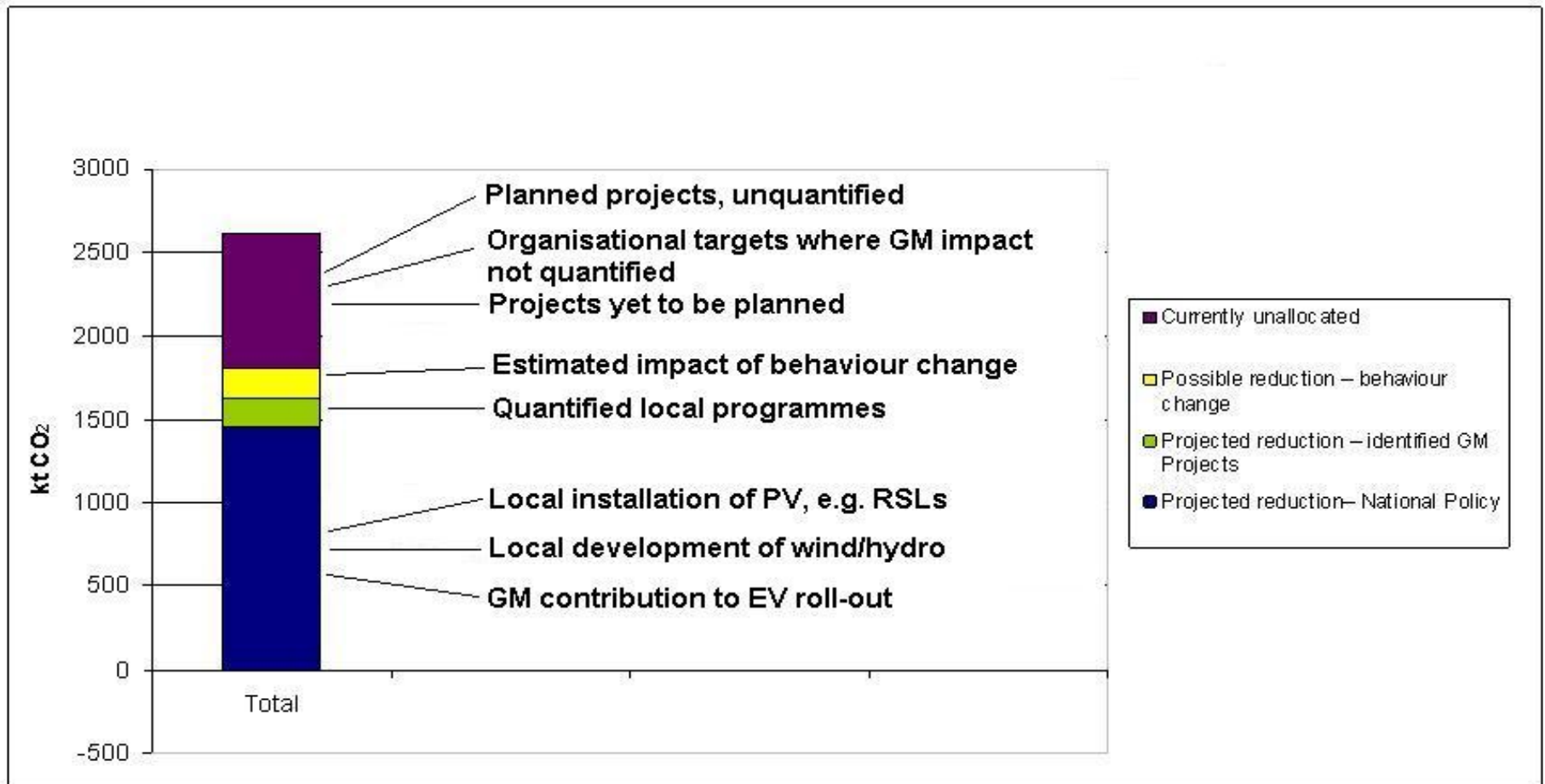
Key Issue

Direct CO2 Emissions from GM Area



Published GM CO2 1990 Levels National Trend

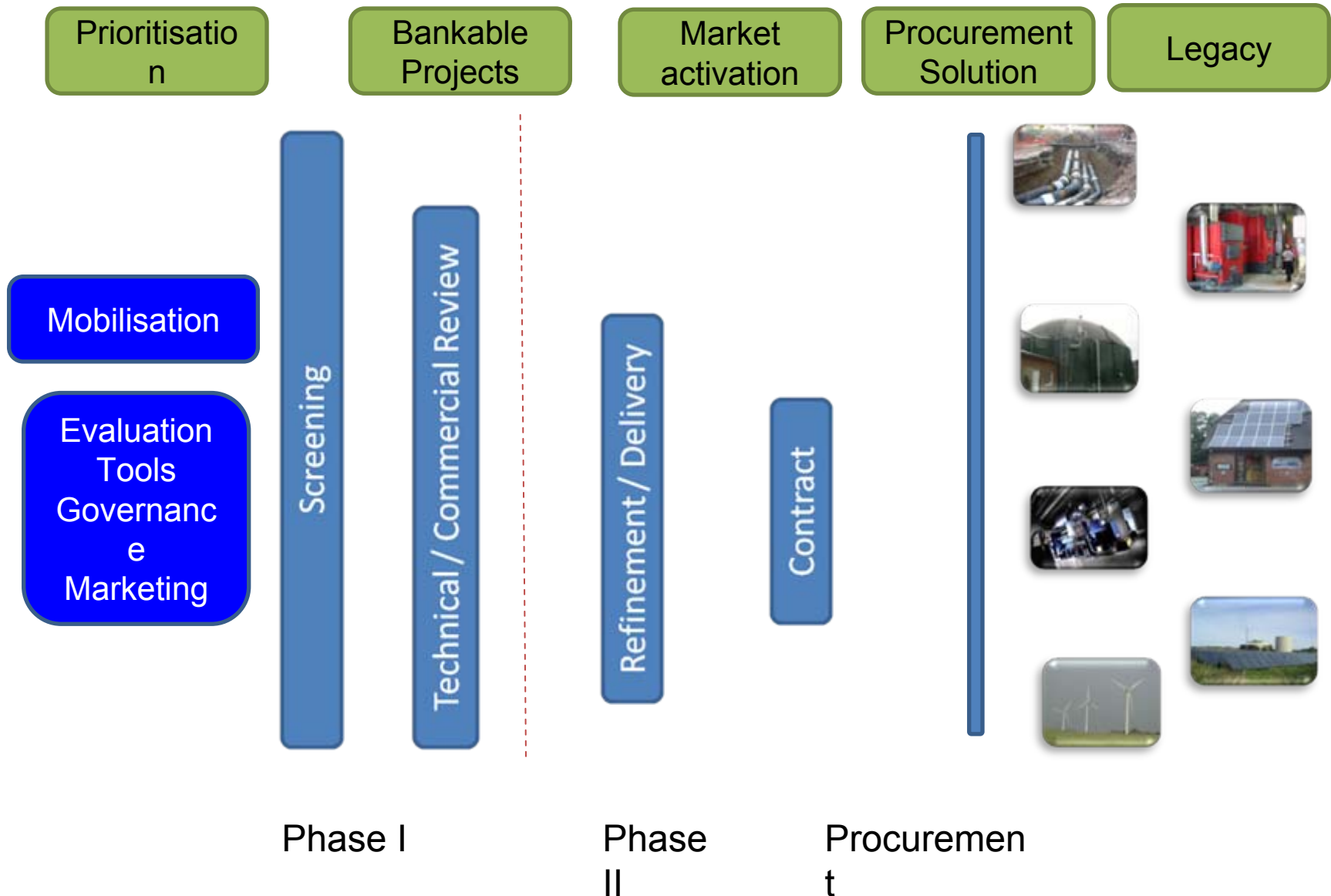
GM Contributions to Emissions Savings



Memorandum of Understanding with DECC

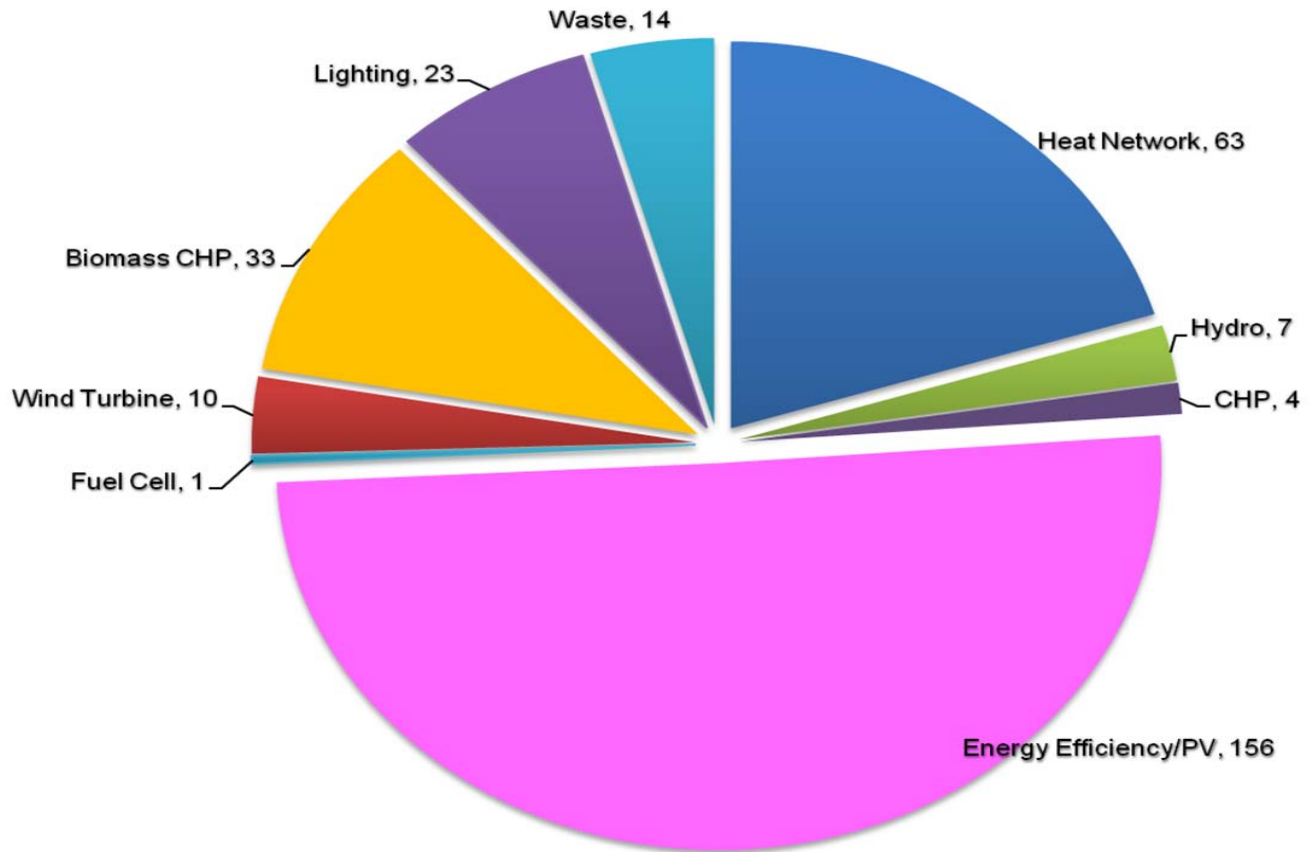
PLAN	1.1	To jointly prepare a GM Climate Change Implementation Plan to 2015, including local actions and national contributions.
	1.2	Explore translating the UK 2050 emissions reduction trajectories to GM level, producing a robust GM level pathway to meet 2050 targets and a methodology to enable other areas to do the same.
	1.3	Work with other pioneer cities to increase key data access and develop a metrics system which provides a consistent insight into low carbon performance at different spatial and institutional scales.
ENABLE	2.1	Share experiences and identify mutual opportunities to progress carbon literacy and behavioural insight work.
	2.2	Review approaches to improving business energy efficiency, in partnership with ENWORKs including: analysis of the ENWORKS dataset; links with the Green Deal; a review of the business support tools available and considering a proposal for piloting Enworks across the pioneer cities.
	2.3	Jointly improve the quality of GM's European energy bids with the aim of increasing their success rate
	2.4	Jointly develop a proposal for accelerating and overcoming barriers to heat network expansion to i) cultivate planned project(s) beyond the feasibility stage, and ii) establish and develop options to enable fast-track delivery of heat network projects
DELIVER	3.1	Develop an initial proposal and deliver a portfolio of Green Deal and ECO 'go early' schemes in housing and public sector stock.
	3.2	Develop and deliver a portfolio of demonstrator schemes for building-scale renewable heat which promotes beneficial training and supply chain outcomes.

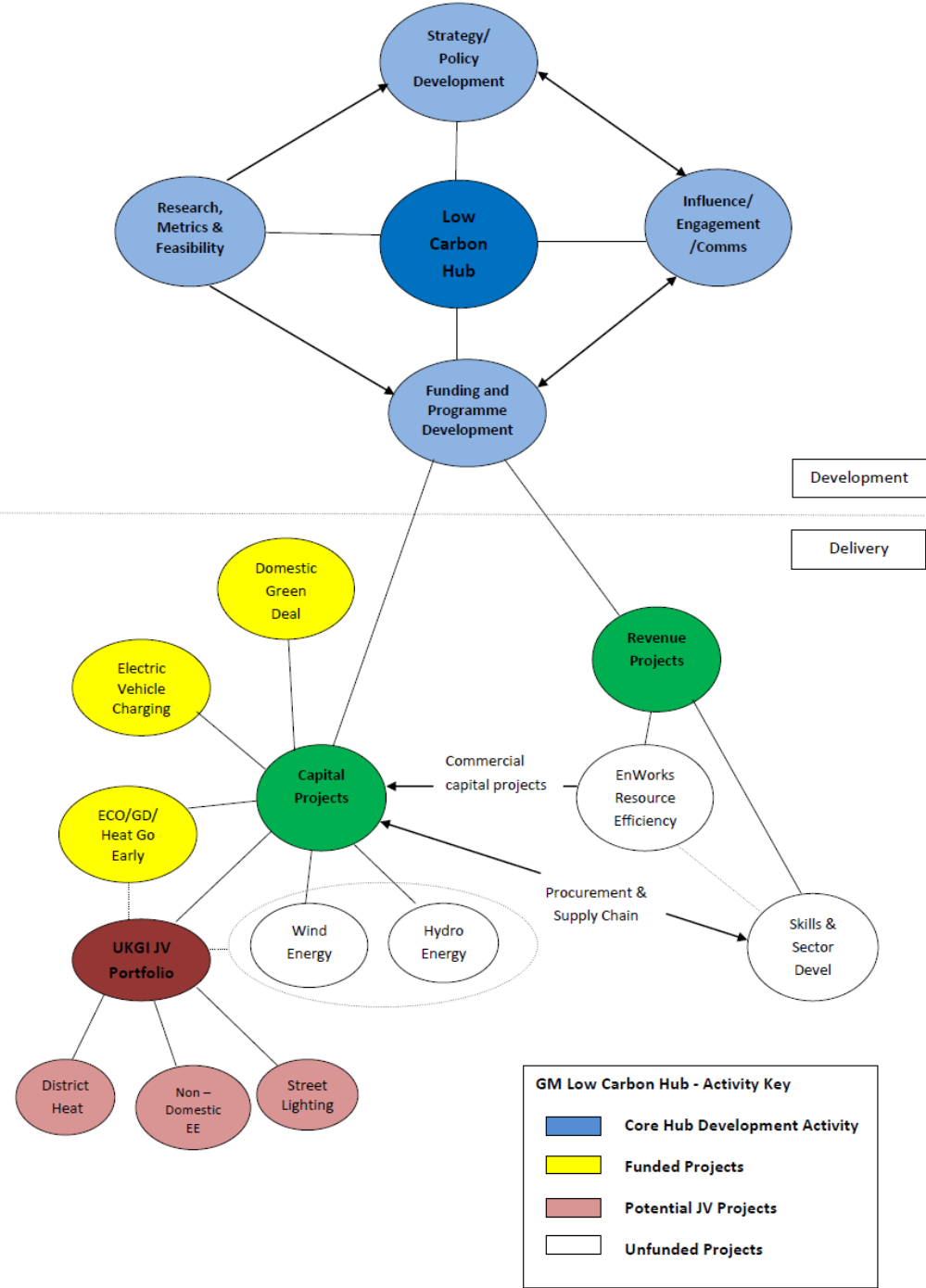
Joint Venture with UK GIB



JV GIB : Potential Portfolio

Weighted
(Allowing
for risk)
c£320m





GM Low Carbon Sector

- Greater Manchester has a broad LCEGS presence:
 - 1,941 companies
 - 37,000 FTE employees
 - £5.5bn sales pa
- Growth rate in 2011/12 of 3.8%
- 950+ companies identified and classified

Sector Specialisms

- GM a leading LEP in LCEGS, with a larger than expected sector presence
- Greater Manchester has presence in almost every LCEGS sector, with particular strengths in:
 - Renewable energy
 - Building technologies and energy management
 - Environmental / technical consultancy
 - Waste management, recovery and recycling

Economic Benefit

- A significant proportion of activity in the sector is in higher value-added activity
 - 19% of all activity in the sector in Greater Manchester is in manufacturing
 - 5% is in engineering services
 - 5% in R&D activity
- GM's LCEGS exports grew by 2.9% between 2011 and 2012
- There are opportunities for companies from engineering, manufacturing, process and professional services sectors to diversify into the LCEGS sector.

Low Carbon Hub priorities 2013/14

Buildings

Green Deal and ECO
Public sector projects for Joint
Venture with GIB

SCP

Business engagement and
investment tools
Measuring carbon footprint

Transport

Establish emissions baselines and
explore interventions to deliver
carbon reduction

Natural Capital

Ambassador for natural
environment
Map our existing activity

All

Exploring
potential of
public sector
procurement

Developing
common
framework for
carbon metrics

Developing GM
Energy
Enterprise

Communication
with wider
stakeholders

Energy

GM Energy Enterprise
Heat trials and feasibility
Energy procurement

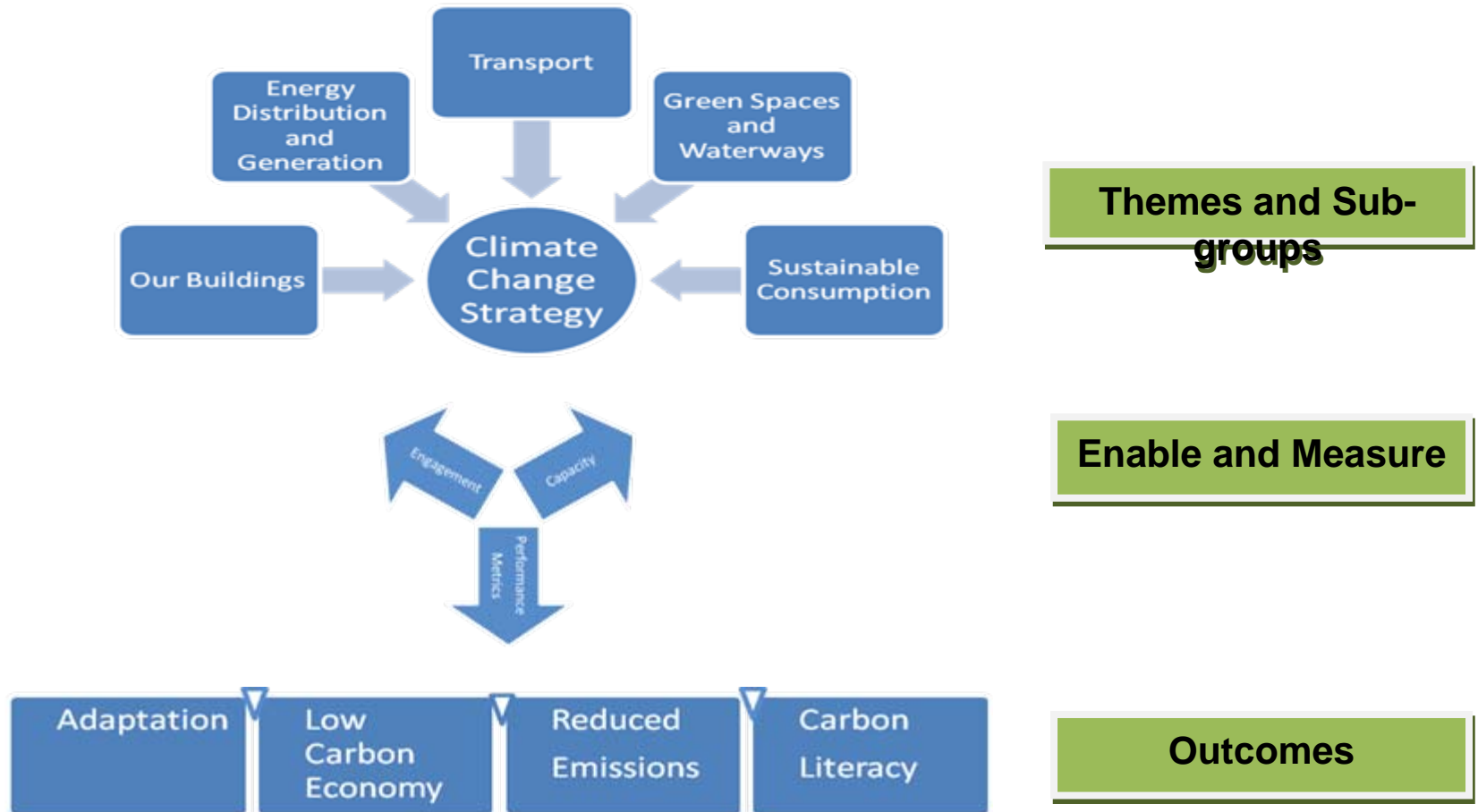
Sector growth

Supporting Joint Venture,
Green Deal and NEDO
procurement

Skills

Analysis of the skills
requirement
Developing courses to match
market need

Delivery Approach

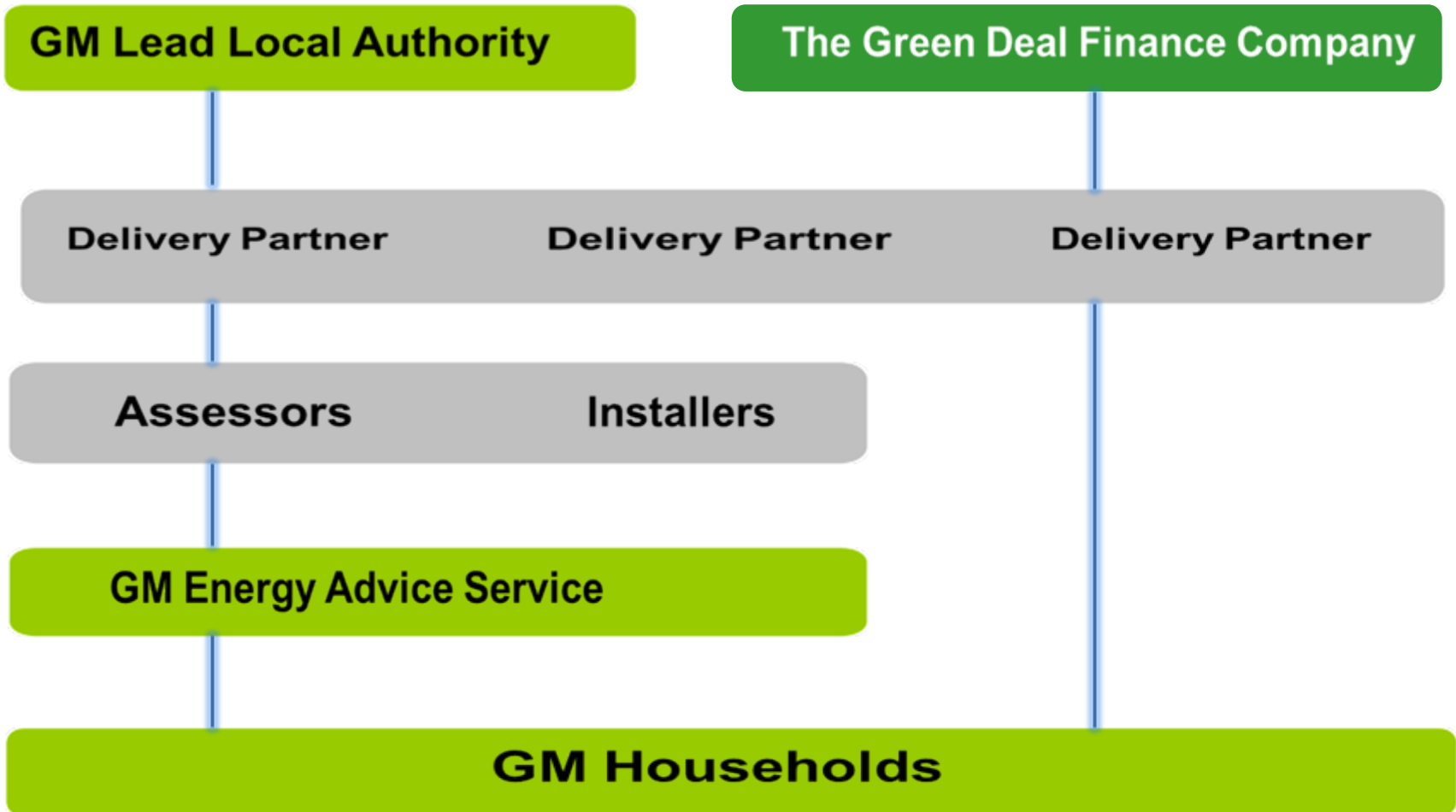


Themes : Buildings

- ❖ 15, 000 homes retrofitted via Green Deal over 3 years
- ❖ 2,100 fuel poor households supported, saving the NHS est. £3m
- ❖ £100m spend in supply chain
- ❖ Minimum of £16m of ECO attracted into GM
- ❖ 1000 jobs supported
- ❖ £36m of GVA generated
- ❖ Up to 25%+ savings secured through behaviour change



Green Deal in Greater Manchester



Themes : GM Energy

- ❖ GM use of electricity, gas and other fuels accounts for 72% of direct emissions
- ❖ In 2010 GM spent over £5 billion on its gas and electricity
- ❖ To meet GM's CO₂ emissions reduction target by 2020, est. 3TWh of low carbon heat generation & 1TWh of low carbon electricity generation is needed.
- ❖ 2010 study identified potential for 6,871MW of renewable energy installed capacity across



Themes : GM Energy

❖ Current Projects

- the UK's largest LG energy switching collective,
 - 57,000 residents could financially benefit
- smart network aggregation, trading, demand shift and voltage variation trials,
- local government energy contract innovation
- Community energy investment models
- Heat network and building scale heat Feasibility
- Heat Mapping
- Hydro, geothermal and wind opportunities
- Energy modelling
- DECC strategy input: 2050 cities, PV, EMR, Green deal & building scale heat



GMCA

GREATER MANCHESTER
COMBINED AUTHORITY

GM Natural Capital

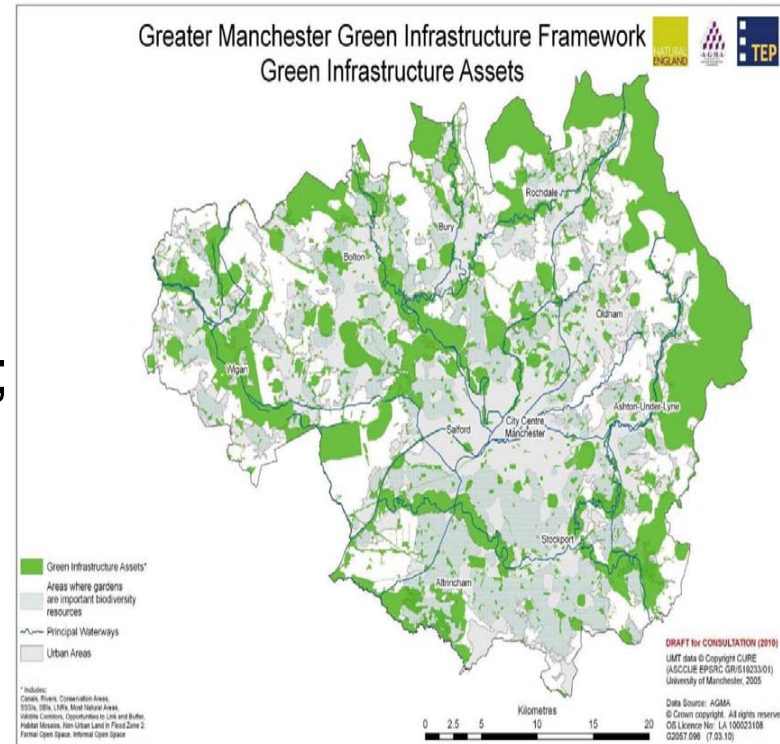
- ❖ Natural Capital within GM encompasses land, air and water. During 13/14 the ecosystems services value of these assets will be mapped;
- ❖ 17% of GM is covered by tree canopies. We aim to protect and enhance this by 1% each year. Trees play a vital role in climate change adaptation;
- ❖ There are over 827km of waterways within GM, providing a valuable tourism and activity asset.
- ❖ Life + Bid



[River Irwell](#)
[Salford by Keith](#)
[Williamson](#)

GM Natural Capital

- ❖ Natural Capital plays a key role in:
- ❖ Storing X tonnes of CO2 in peat and Mosslands;
- ❖ Protecting biodiversity, 27% of GM is of bio diverse importance;
- ❖ Protecting 220,000 homes from the risk of flooding;
- ❖ Health and Wellbeing benefits;
- ❖ Embedding ecosystems thinking into decision making;
- ❖ 25% of GM is rural.



Sustainable Consumption & Production

❖ 87% of GM businesses stated that energy & material prices were 2 of the 3 top cost pressures (New Economy Study)

❖ Defra research highlights annual savings to business of £55bn with less than a 2 year payback period

❖ 80% of senior manufacturing executives see energy and resource security as a threat to growth (EEF survey)

❖ Average saving identified by ENWORKS is £73,000, over 1/2 of which require no capital investment. ENWORKS funding agreed.

