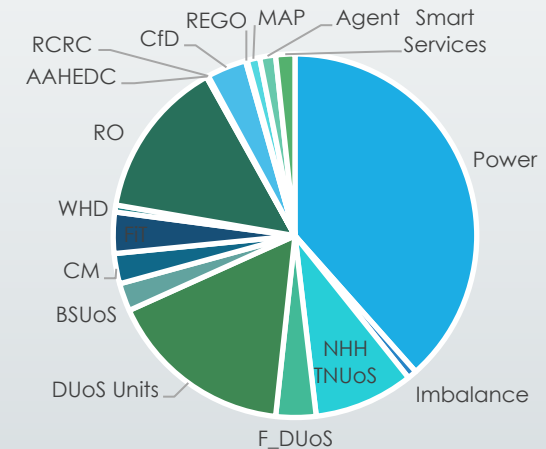
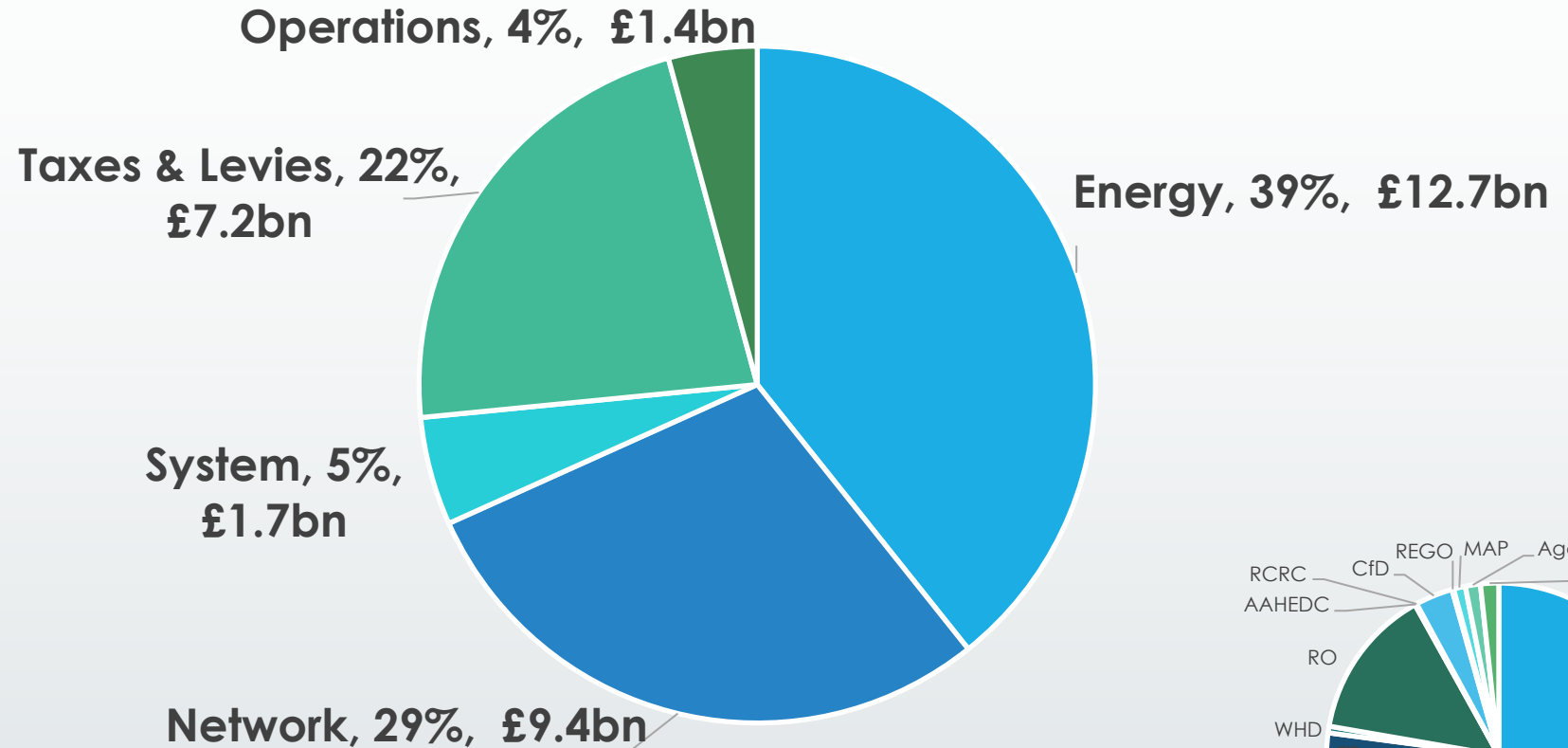




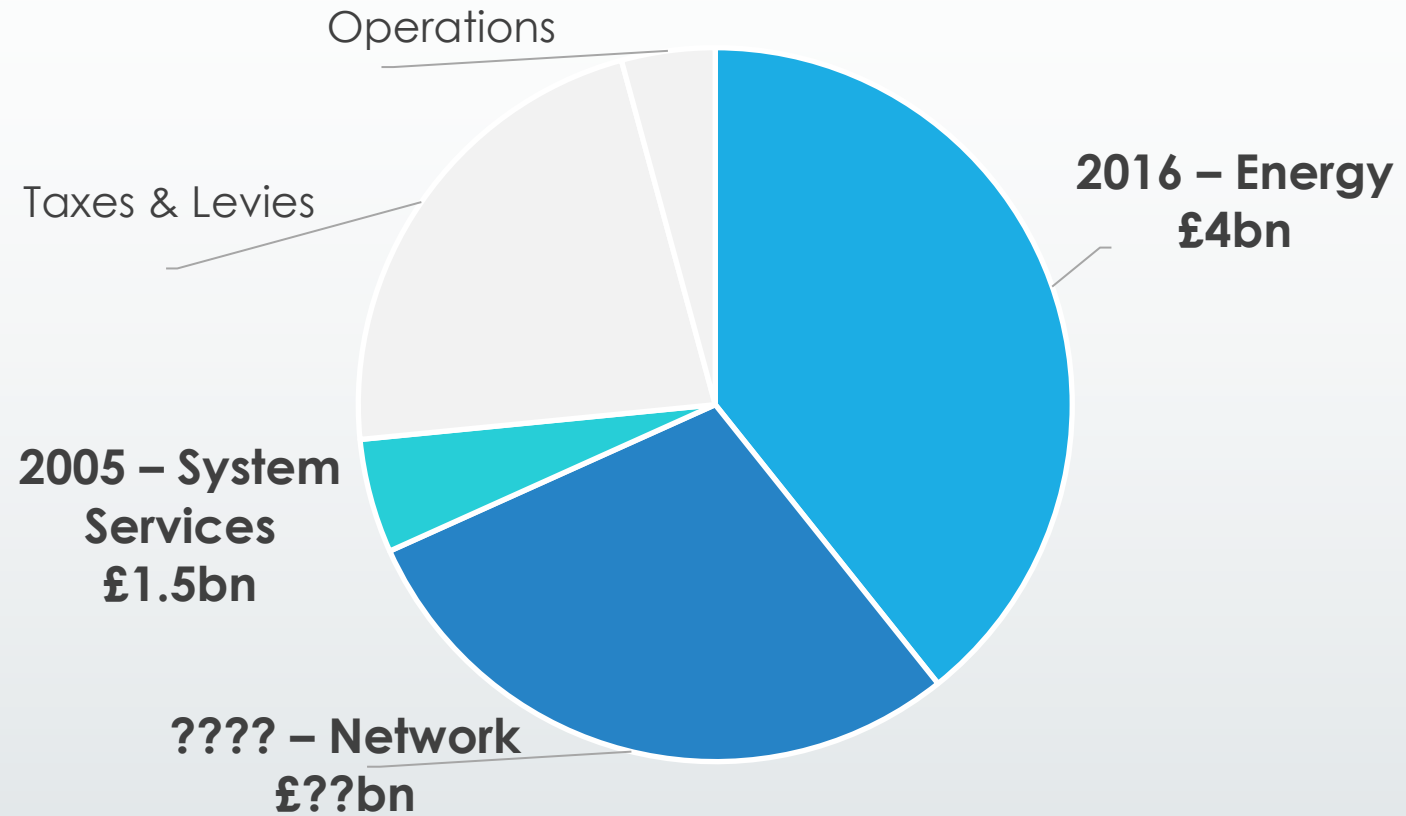
# The Opportunity for Local Flexibility

11 Sep 2019

# UK spends ~£32bn p.a. on electricity



# Network is the next opportunity for DSR



## Network is inherently local

- 1) Electrification of heat and transport will hit the LV network especially hard
- 2) The network is a £100bn asset
- 3) We will need to at least double its capacity

# We have 2 routes to grow capacity

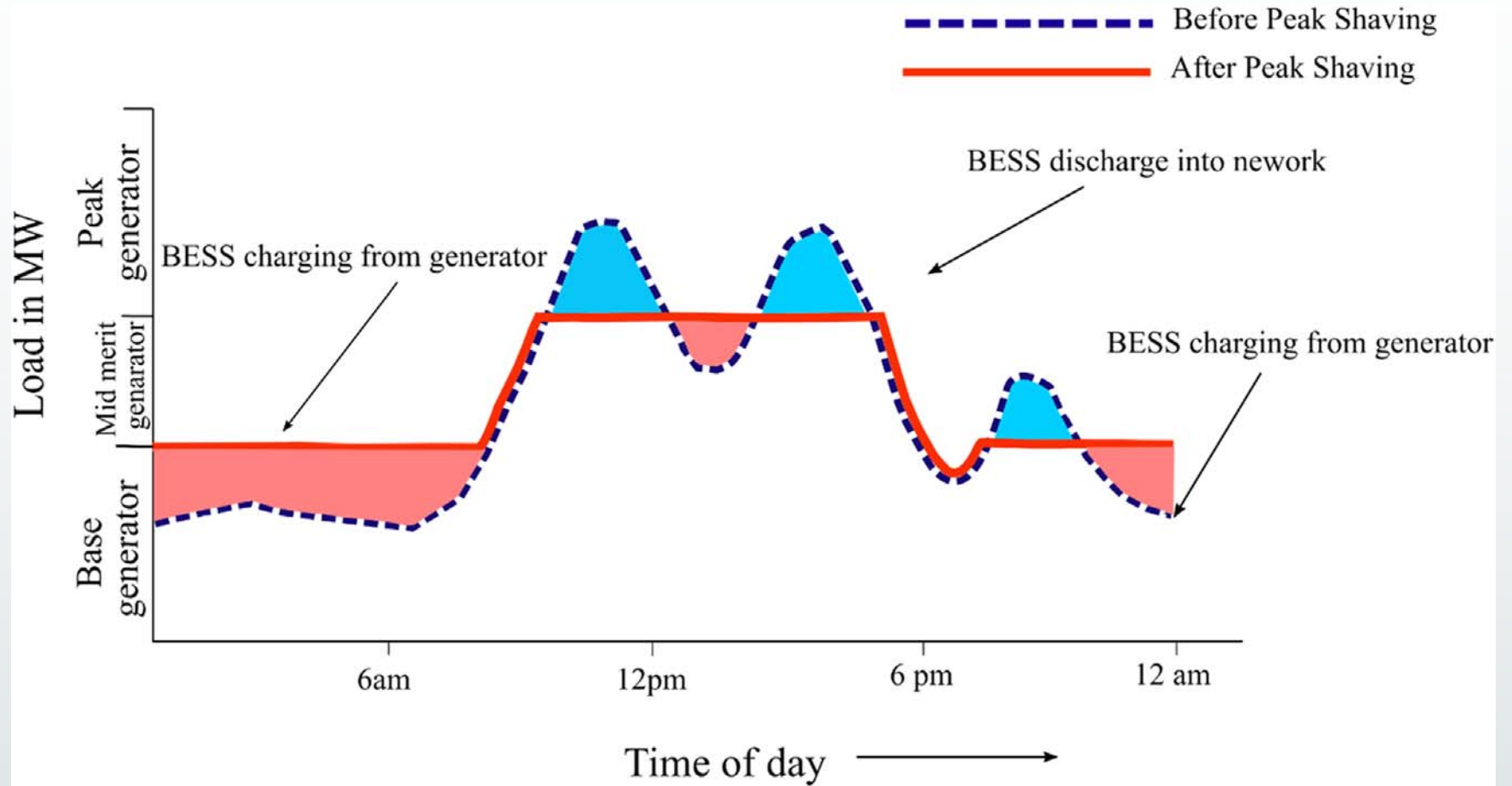
## Brute Force

- ▶ £60-100bn in copper

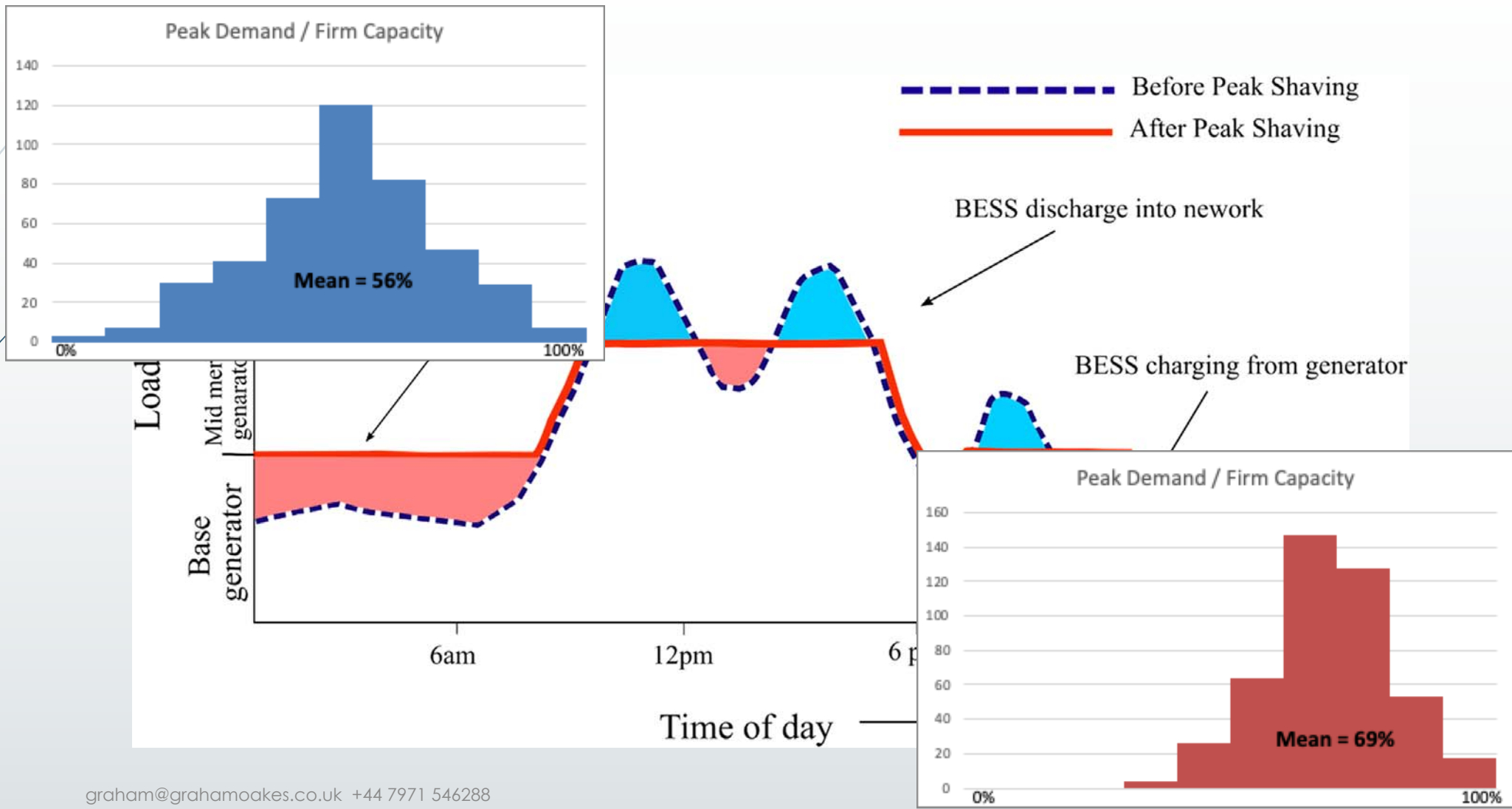
## Smart

- ▶ Some copper
- ▶ Smart demand maximises utilisation of that copper

# Smooth energy flows increase utilisation



# Smooth energy flows increase utilisation



# Smart demand creates £30-50bn value to the network

## Brute Force

- ▶ £60-100bn in copper

## Smart

- ▶ 25% from smooth energy flows
- ▶ 25% from smart redundancy
- ▶ £30-50bn in copper
  
- ▶ Annual value of smart ~£2bn



## Timing Signals:

Three time horizons drive investment & operational signals

	Investment (5+ years)	Optionality (1-4 years)	Operational (secs - days)
Energy	PPA	PPA	Day Ahead & Intraday
Network	£1.5 bn	£0.5 bn	Trading?
System Service	CM	Ancillary Services	BM

## Current State:

Pricing signals still need to be developed

	Investment (5+ years)	Optionality (1-4 years)	Operational (secs - days)
Energy	PPA	PPA	Day Ahead & Intraday
Network	TCR & Access SCR	~£2m	Trading?
System Service	CM	Ancillary Services	BM

# Thank You