

An aerial view of a city skyline, likely London, with a prominent circular building and a tall spire. The image is overlaid with a semi-transparent green filter. The text is centered in the upper half of the image.

Retail energy market regulation

A case study in how not to do things...

Steve Smith

RPI Annual Westminster Conference

2nd May 2018

DISCLAIMER



OUTLINE

1)

Why competition mattered and what it delivered

2)

Is there a problem in retail energy?

3)

The institutional framework that failed customers

4)

Episode IV: A New Hope?

OR MORE SIMPLY....

How did we get from here?



POSTER
CHILD .



To here in 15 years...



And can we get back?

WHAT DID THE ROMANS EVER DO FOR US?

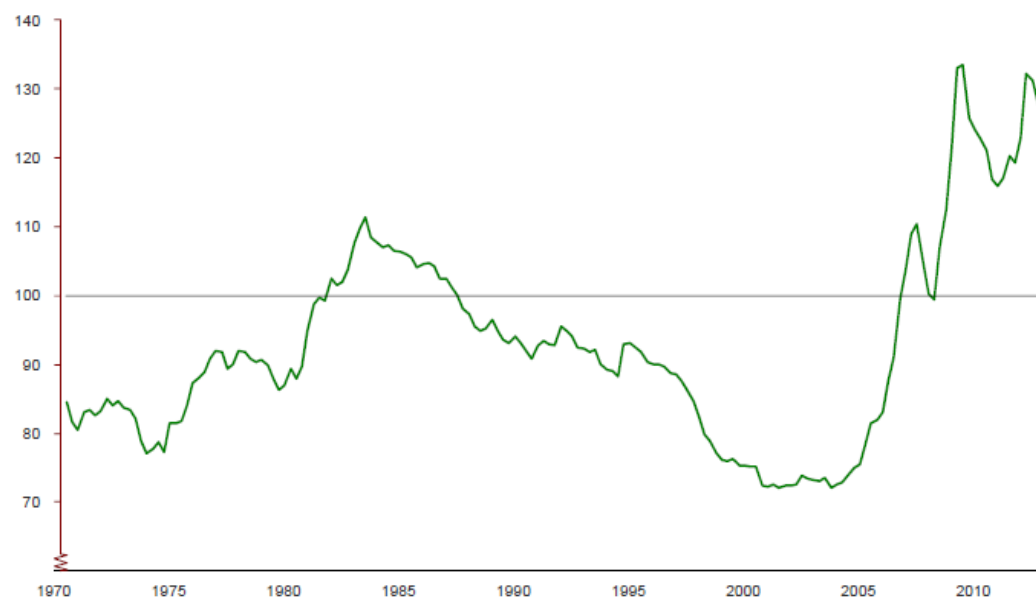
1 Huge improvements in efficiency

- Improvements in gas production, storage and electricity generation.
- This has lowered prices for businesses and customers.
- Whilst delivering billions in investment and increased quality on networks.

2 Innovation & Competition in Retail

- Dual fuel
- Multi-year fixed tariffs: a significant barrier to entry and exit.

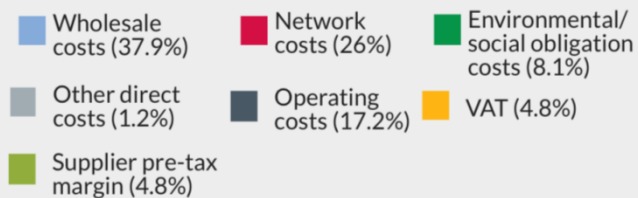
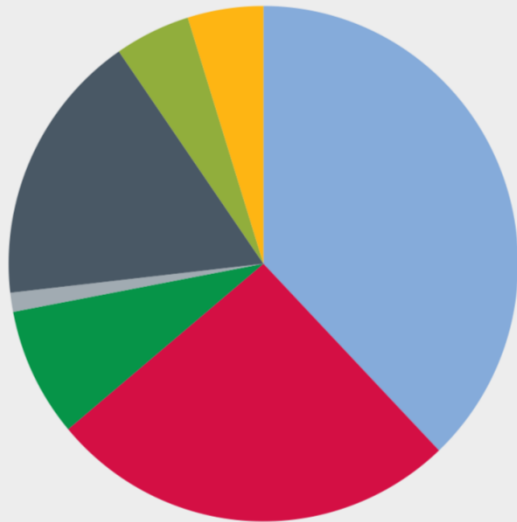
Index of real domestic fuel and light prices (Q1 1987 = 100)



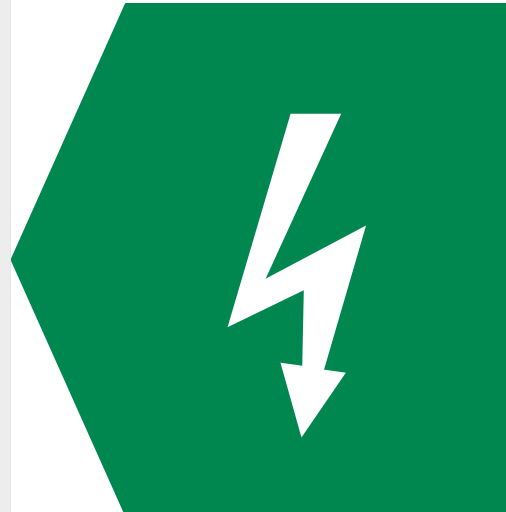
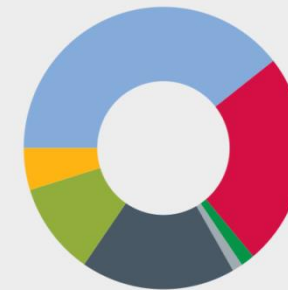
Source: Quarterly fuel prices, DECC. Table 2.1.1

ENERGY PRICES 101

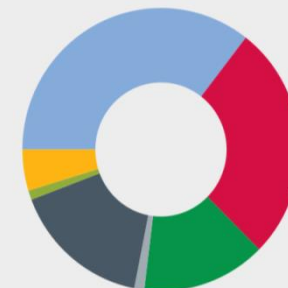
Dual fuel bill



Gas bill



Electricity bill



WHAT IS THE PROBLEM ENERGY REGULATION IS TRYING TO SOLVE?

The Conventional Wisdom



Lack of **customer engagement** leads to millions of customers being ripped off



Big 6 operate **dual pricing** (active vs. inactive) – stifling growth of entrants



Customer Detriment of £1.4 - £2 billion per annum



Series of ever mover **draconian interventions** – Stephens's Procrustean Bed – leading to reinstatement of price caps



WHAT IS THE PROBLEM ENERGY REGULATION IS TRYING TO SOLVE?

The Inconvenient Truth

1)

- There are **no excess profits** in the conventional sense – concerns are purely distributional

2)

- **Dual pricing** seen by all energy companies once established

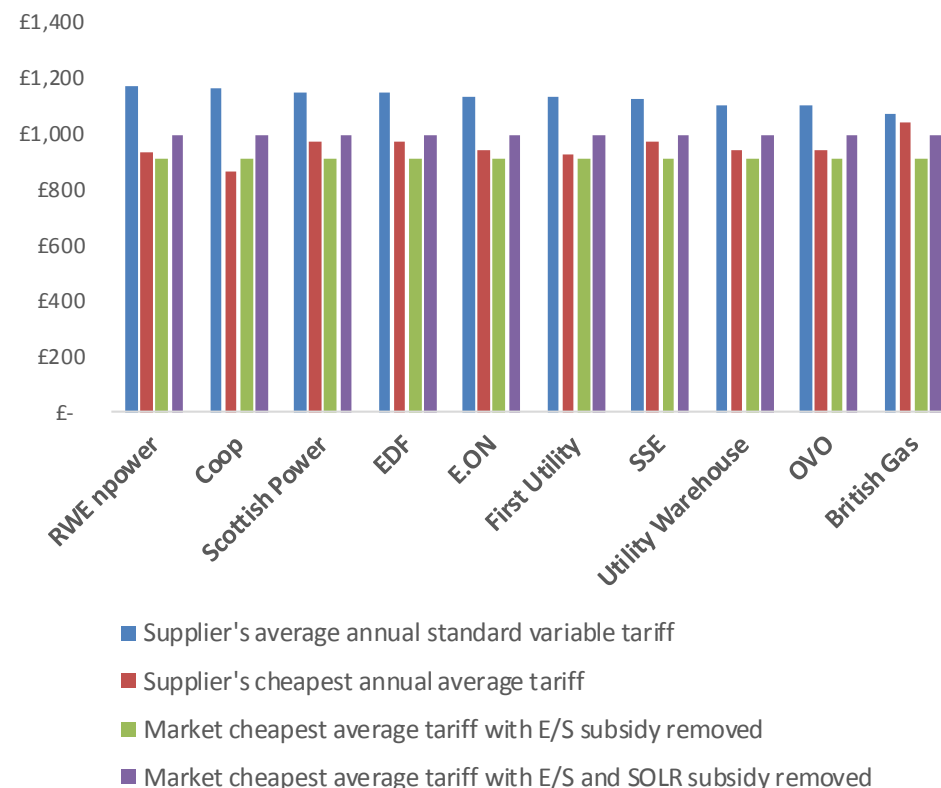
3)

- Perception of rip off made worse by:
 - Subsidy given to entrants by **Government E&S Schemes**
 - Supplier of last resort / credit arrangements that **subsidise unsustainable business models**

4)

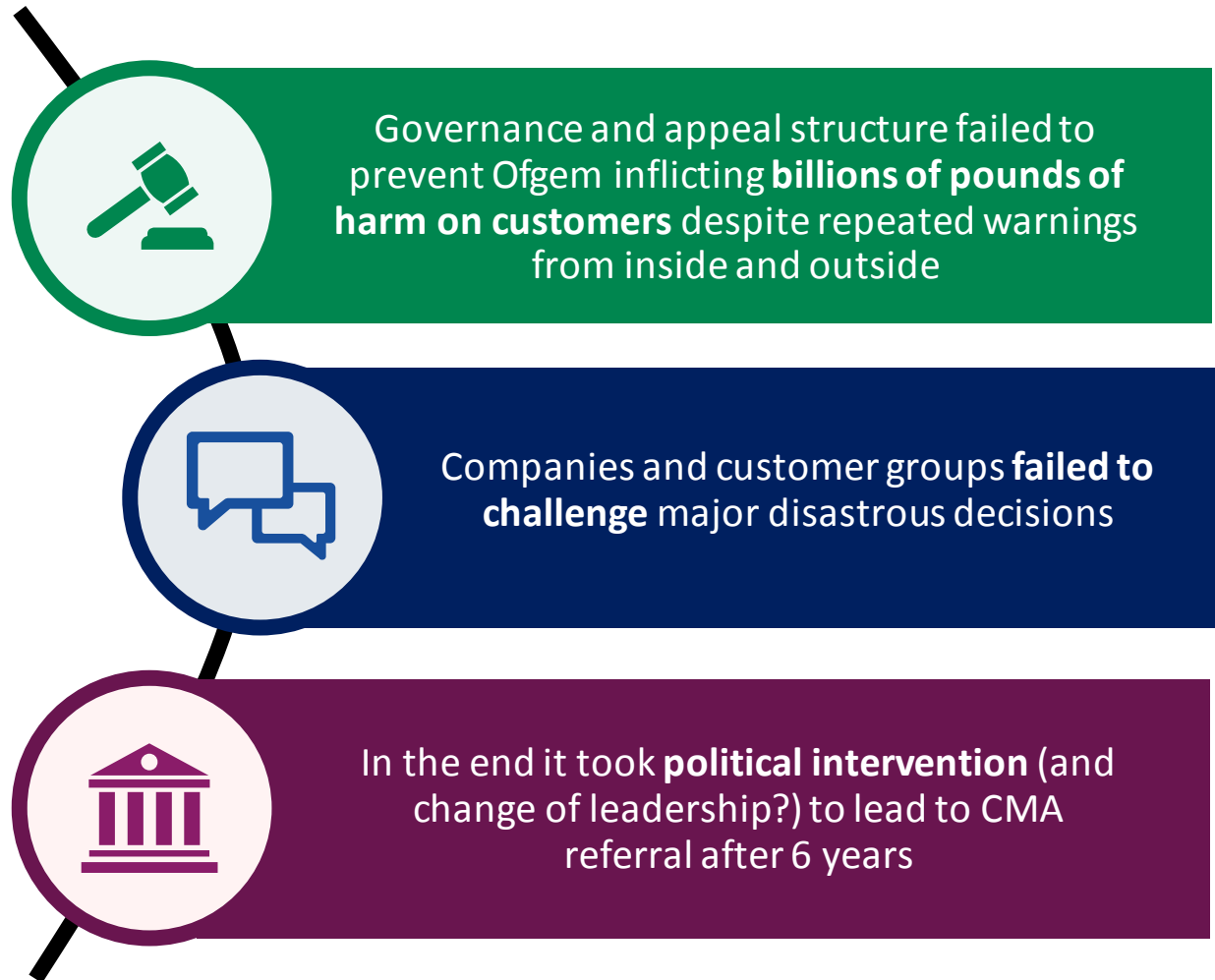
- **Interventions (as predicted) made matters worse** – energy retail was, on average, not profitable pre-intervention.
- Tariff spreads also less marked with **more tariffs**.

Average tariff prices by supplier:
Standard Variable vs Cheapest available (GB) adjusting for small supplier subsidy



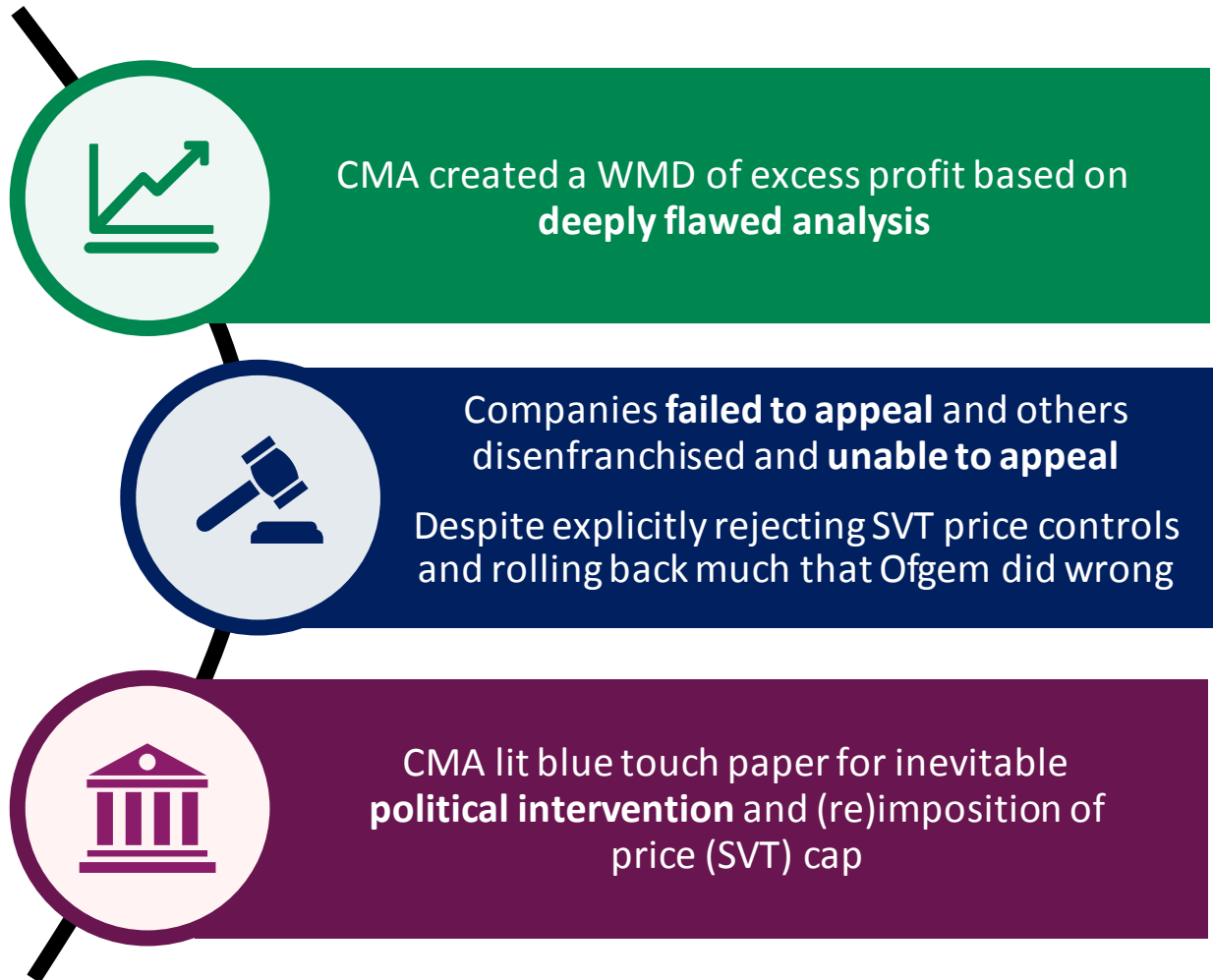
HOW DID THIS HAPPEN?

Institutional Failings (i)



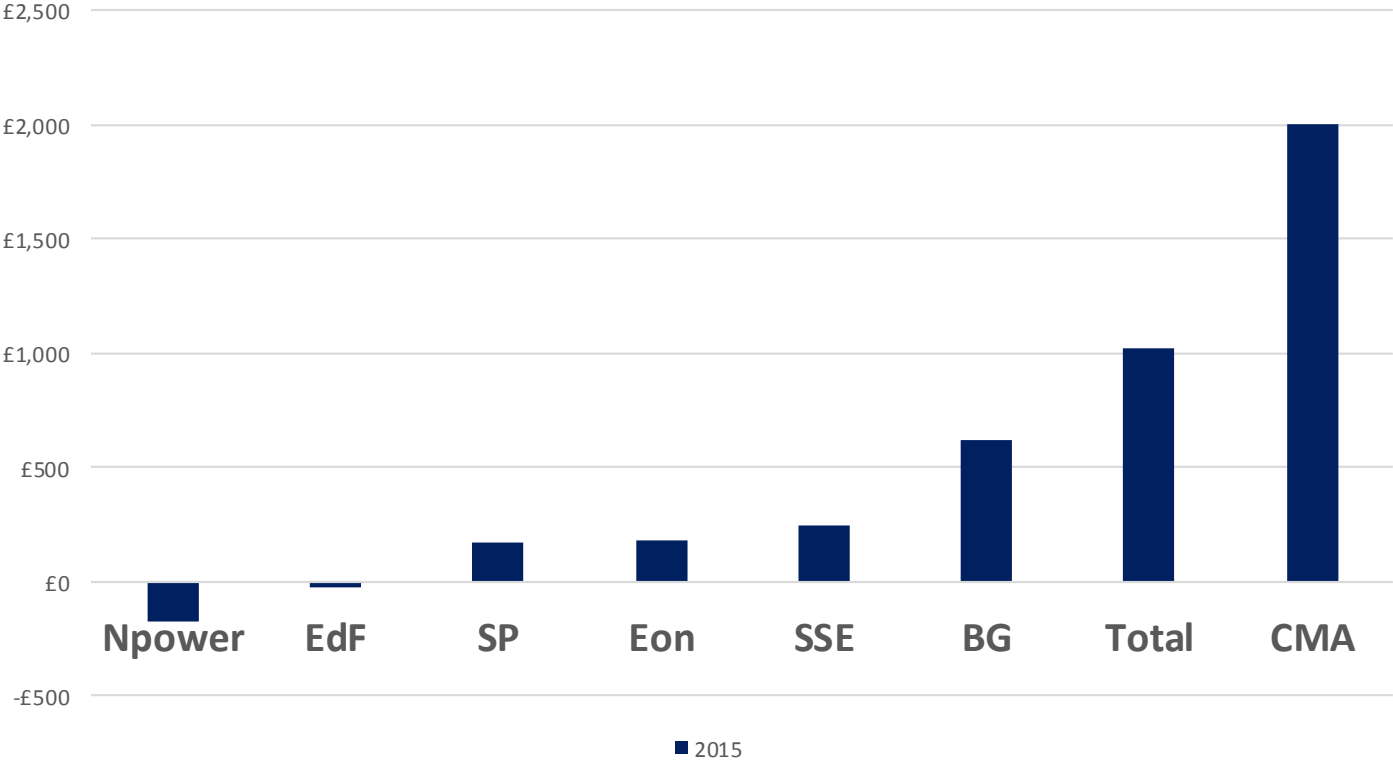
HOW DID THIS HAPPEN?

Institutional Failings (ii)



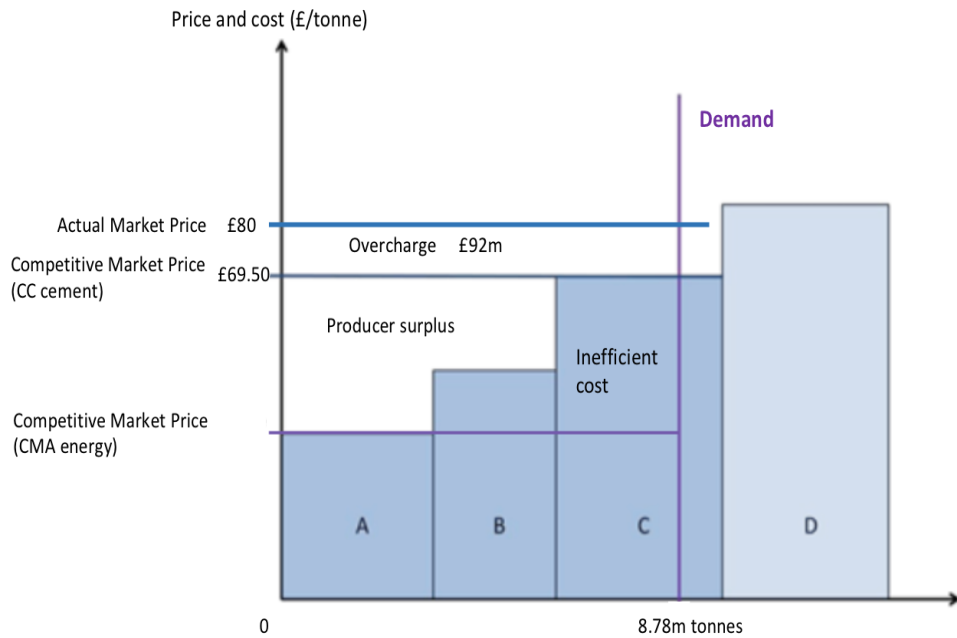
EXCESS PROFITS / CUSTOMER DETRIMENT

Supplier profits vs. CMA Detriment (2015)

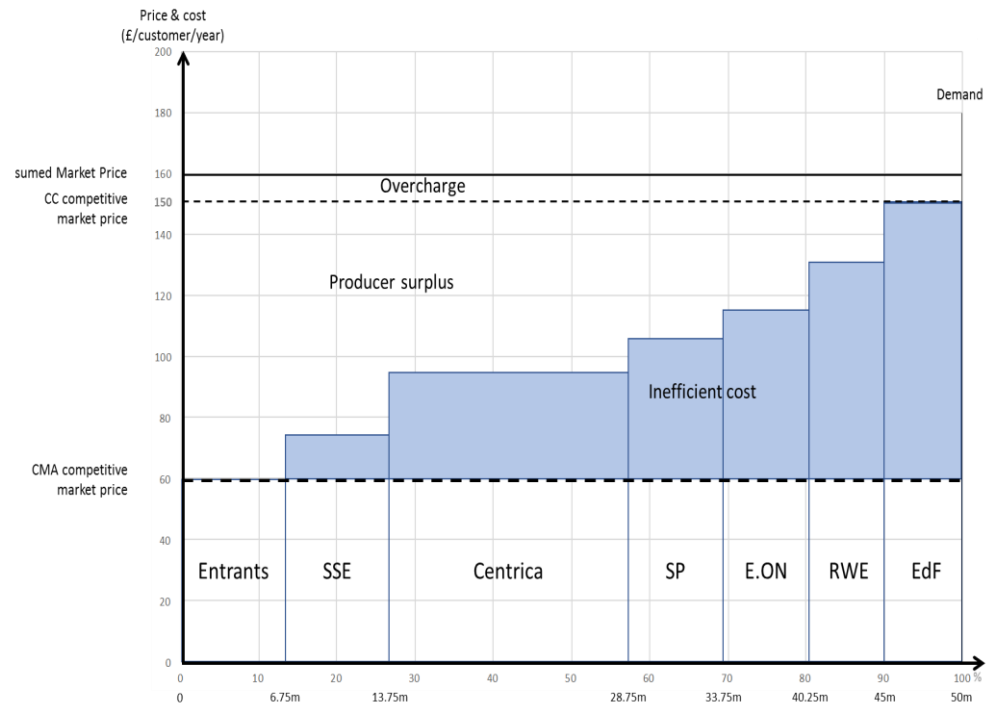


EXCESS PROFITS / CUSTOMER DETRIMENT

Comparison of CC and CMA calculations of customer detriment: cement market

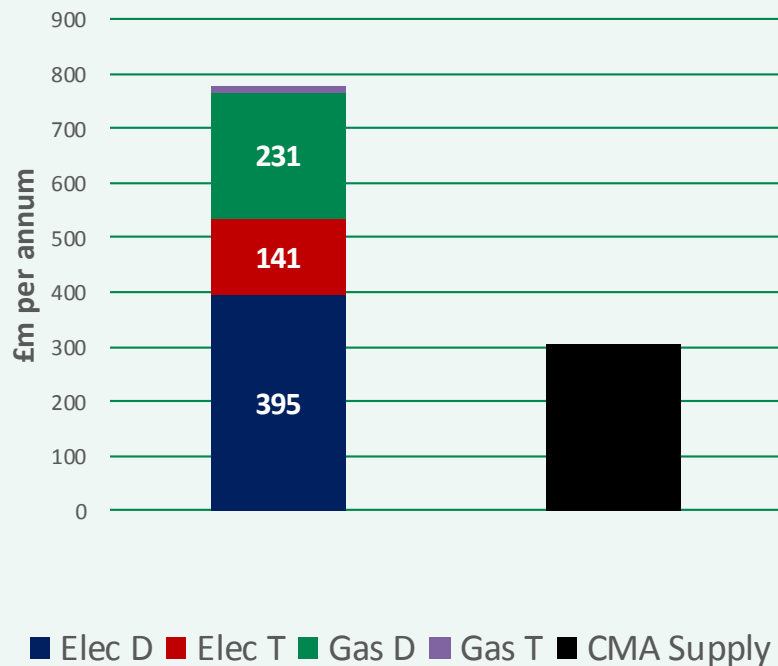


Illustrative calculation of CMA detriment: retail energy market

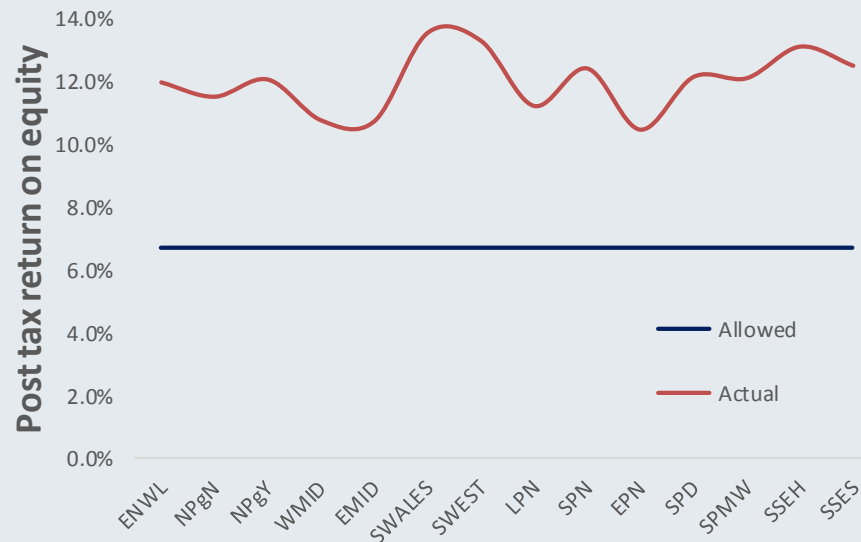


WILL THE PRICE CAP CURE BE WORSE THAN THE DISEASE

Estimates of Annual "Excess Profits"



Electricity Distribution returns DPCR5



IS THERE A WAY BACK?

1)

Model based on customers **accessing, assessing** and **acting** is doomed to failure

2)

Technology, AI / ML and **open data**, coupled together, render this model irrelevant

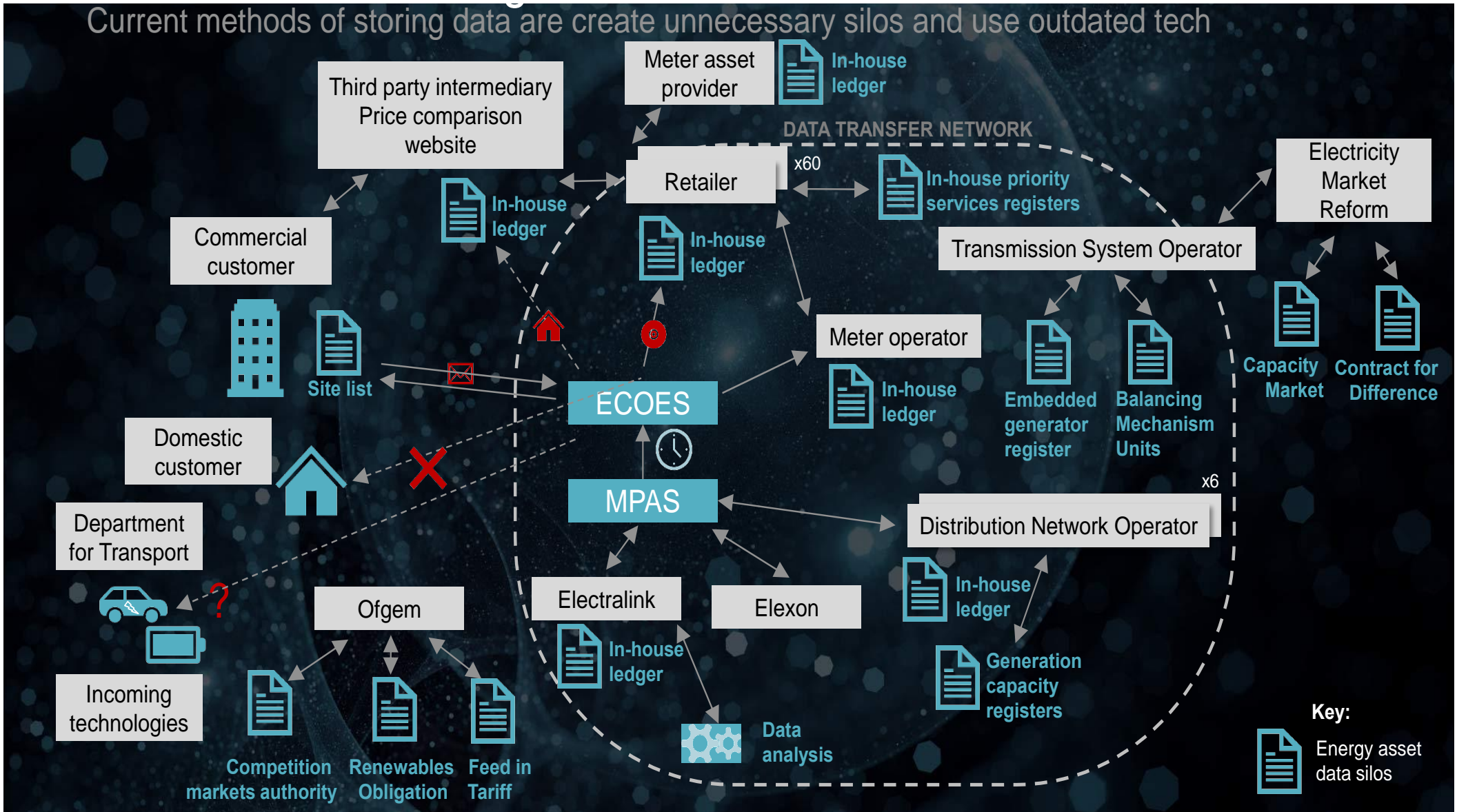
3)

Make (nearly) all customers active and bring genuine **demand side response** at every level

4)

The potential efficiency gains across production, networks are **£billions per annum** (remember Energy Prices 101)

AND THIS (X2) ...



AND THIS (BIG AND CENTRALISED) ...



TO THIS?



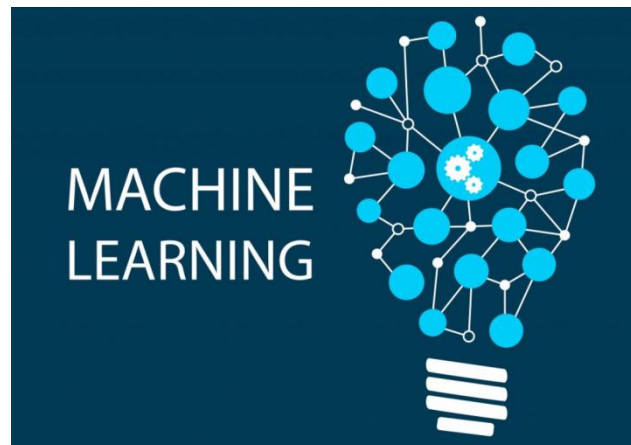
TfL Travel information as open data

- Live data and APIs include;
- Bus arrivals – stream and API
 - Tube movements, departures, status
 - Cycle hire docking station status
 - River boat status and arrivals
 - Roads status
 - Journey Planner API



- Reference data includes
- Stations, stops and piers locations
 - Timetables
 - Future works on Tube, Roads

All available in our Developers' Area of tfl.gov.uk



OR MORE SIMPLY...



CONCLUSIONS

1 Political Interest

Energy is political and it always will be

When prices are rising, we need strong institutions and individuals to avoid intervention

2 The 'Boiling Frog' Problem

Even in good times, beware of repeated poorly designed interventions storing up future trouble (ROCs, EEC, EU ETS etc.)

3 Institutional Framework

The current institutional framework failed customers badly over many years

See RPI 25th anniversary lecture for some tentative ideas on how to fix

4 Technology

Developments in technology (open data, AI / ML) and dramatic reductions in cost of storage create opportunity for huge efficiencies

It couple also provide a route to a more decentralised energy system

5 Customer Engagement

Customers won't be expected and won't need to actively engage

6 Data Architecture

Complete rethink of systems / data architecture of energy system is necessary

Open data and APIs to deliver