

PROJECT DISCOVERY

CITY PRESENTATION

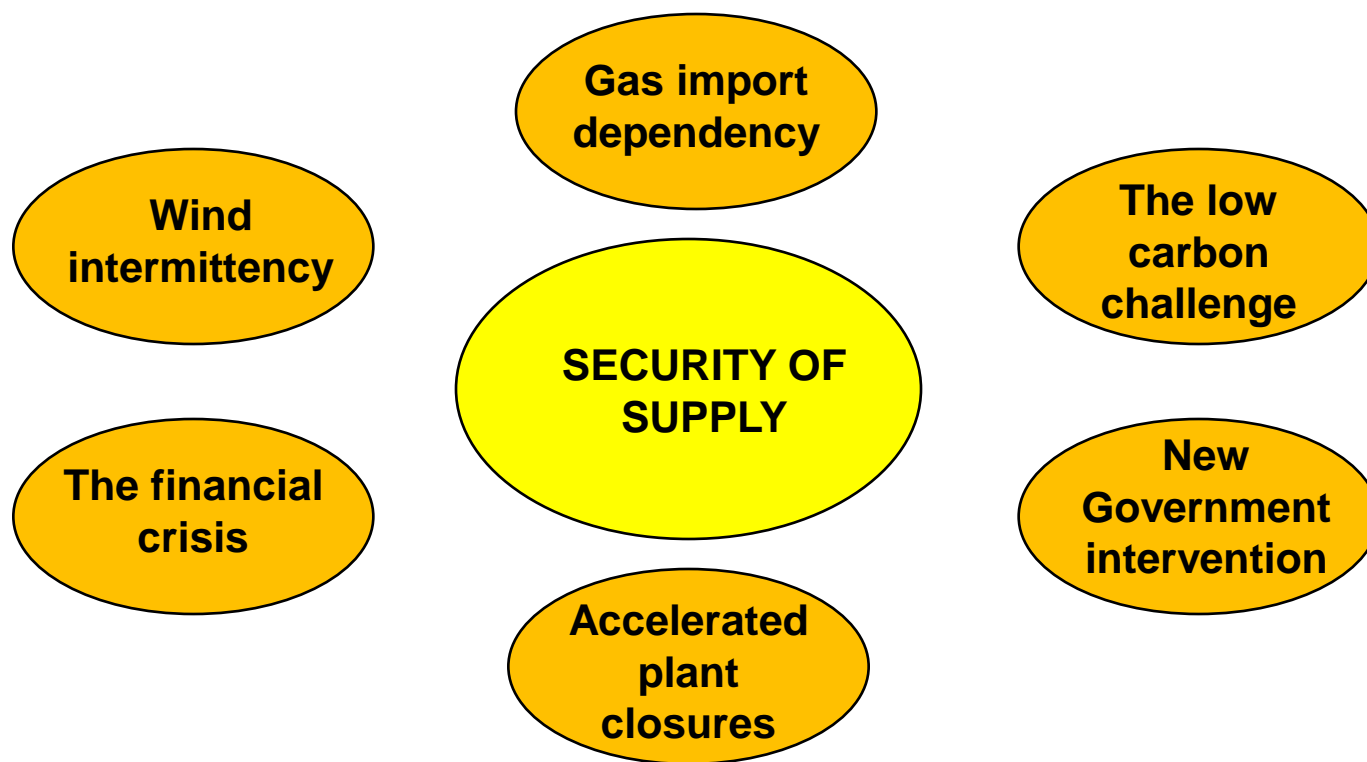
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8 February 2010

PROJECT DISCOVERY

Can GB markets deliver secure and sustainable energy supplies?



PROJECT DISCOVERY KEY CONCLUSIONS

- Ofgem has recommended far reaching energy market reforms to consumers, industry and government
- An unprecedented combination of risks and challenges has combined to cast reasonable doubt over whether the current energy arrangements will deliver secure and sustainable energy supplies
- Prompt action will reduce risk to energy supplies, help lower costs to consumers and help progress towards climate change targets

***WE DO NOT ADVOCATE CHANGE LIGHTLY
IMPROVING THE INVESTMENT CLIMATE IS A KEY OBJECTIVE***

PROJECT DISCOVERY

Three Stages

- **Scenarios**
 - What are the risks and challenges
- **Appraisal**
 - Are the current arrangements good enough?
- **Options**
 - What should we do about it?

NEXT STAGE: CONSULTATION AND ENGAGEMENT

STAGE 1) SCENARIOS

**WHAT ARE THE RISKS AND
CHALLENGES?**

FEBRUARY 2010 – UPDATE ON SCENARIOS

	Green Transition	Green Stimulus
Key supply risk:	Generation variability	Generation variability
CO2 impact:	Down 33% by 2020	Down 46% by 2020
Impact on bills:	Up by 23% by 2020	Up 13% by 2020
Invnt required:	£194bn	£190bn
	Dash for Energy	Slow Growth
Key supply risk:	Gas import dependency	Deferred investment
CO2 impact:	Down 14% by 2020	Down 19% by 2020
Impact on bills:	Up 26% by 2020 (52% by 2016)	Up 19% by 2020
Invnt required:	£110bn	£95bn

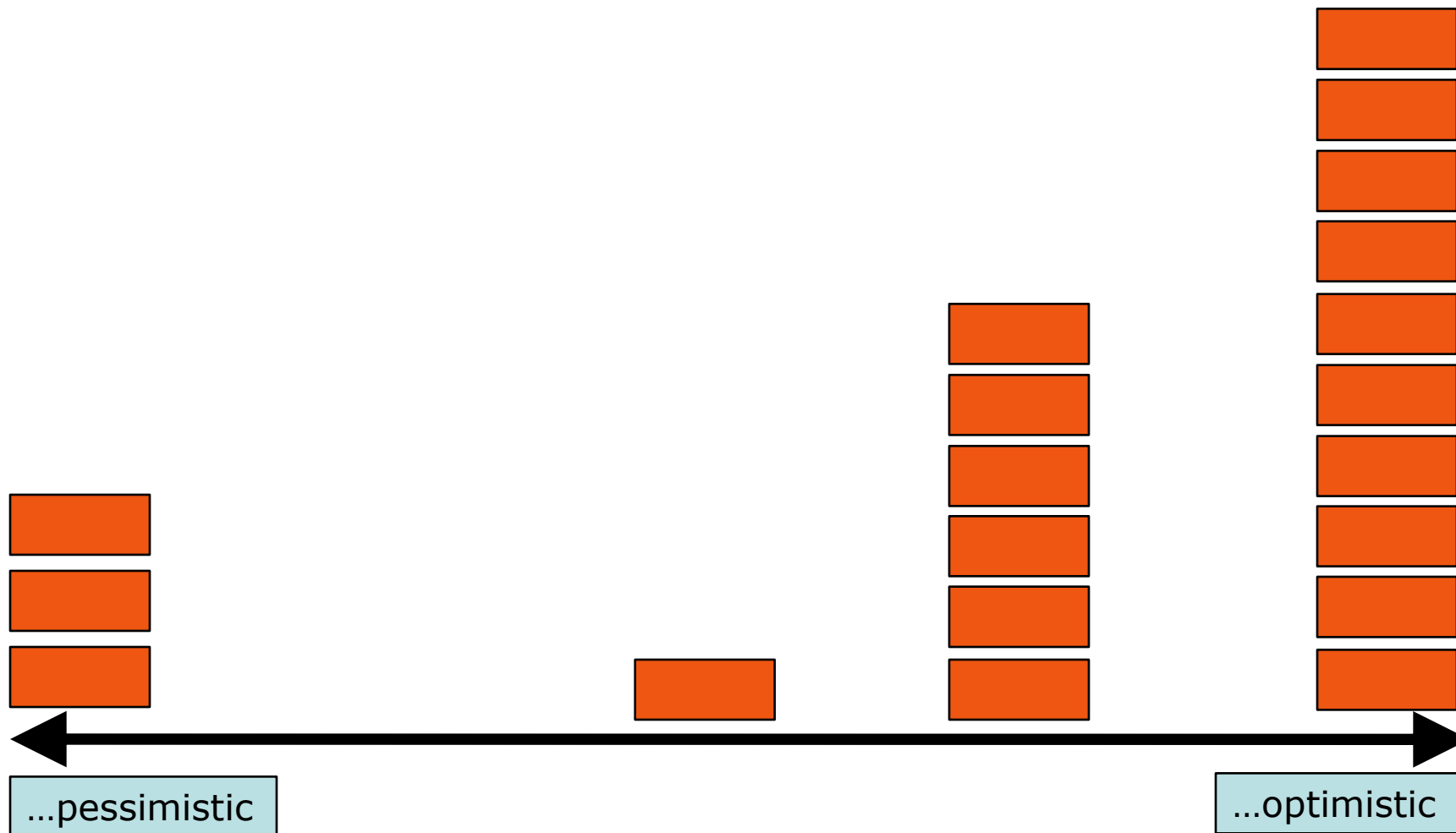
UPDATE ON STRESS TESTS - TRAFFIC LIGHTS

Stress test	Period	Today	Green Transition	Green Stimulus	Dash for Energy	Slow Growth
Re-direction of LNG supplies	1-in-20 severe winter					
Russia-Ukraine dispute	1-in-20 severe winter					
Bacton outage	1-in-20 peak day					
No wind output	1-in-20 peak day					
Electricity interconnectors fully exporting	1-in-20 peak day					

Low impact Moderate impact High impact

THE "REDS" CONTINUE TO OUTWEIGH THE "GREENS"

Respondents view Discovery scenarios as...



WIDE RANGE IN RESPONSES BUT MOST VIEW SCENARIOS AS OPTIMISTIC

STAGE 2) APPRAISAL

**ARE THE CURRENT
ARRANGEMENTS GOOD
ENOUGH?**

KEY FINDINGS FROM THE APPRAISAL

Finding 1: There is a need for unprecedented levels of investment to be sustained over many years in difficult financial conditions, and against a background of increased risk and uncertainty.

Up to £200bn of investment required by 2020

Finding 2: The uncertainty in future carbon prices is likely to delay or deter investment in low carbon technology and lead to greater decarbonisation costs in the future.

Significantly higher emissions or reduced capacity margins

Finding 3: Short term price signals at times of system stress do not fully reflect the value that customers place on supply security, which may mean that the incentives to make additional peak energy supplies available and to invest in peaking capacity are not strong enough.

Greatest risk in scenarios with high gas imports & wind generation

Finding 4: Interdependence with international markets exposes GB to a range of additional risks that may undermine GB security of supply.

Greatest risk in scenarios with highest gas import dependence

Finding 5: The higher cost of gas and electricity may mean that increasing numbers of consumers are not able to afford adequate levels of energy to meet their requirements and that the competitiveness of industry and business is affected.

Consumer bills could rise by up to 60%

COMBINATION OF FACTORS CAUSES CONCERN

KEY FINDINGS FROM THE APPRAISAL (2)

Finding 1: There is a need for unprecedented levels of investment to be sustained over many years in difficult financial conditions, and against a background of increased risk and uncertainty.

Up to £200bn of investment required by 2020

- £200bn in context
- The scale of the investment is a concern because of its characteristics
 - long lead times, long pay-back period, “crowding out”
 - capital intensive, technological and delivery risk
 - risk of intervention, volatile returns, carbon uncertainty
- The potential consequences:
 - Higher than necessary cost of capital => higher bills
 - Lower investment => Lower supply security
 - Missing carbon targets
 - Most likely all of the above

FEEDBACK FROM THE CITY WAS A CRITICAL IN REACHING THIS CONCLUSION

SOME LESSONS FROM THE FINANCIAL CRISIS

- (1) Risk vs. return
- (2) The limitations of risk management tools
- (3) Behavioural effects and the importance of aligning incentives
- (4) “Too big to fail” or “too important to fail” and associated moral hazard issues
- (5) The global nature of risks and uncertainty
- (6) The role of market structure and the Big 6

DO EVEN EFFECTIVE MARKETS NEED TO BE SUPPLEMENTED BY OBLIGATIONS?

STAGE 3) POLICY MEASURES

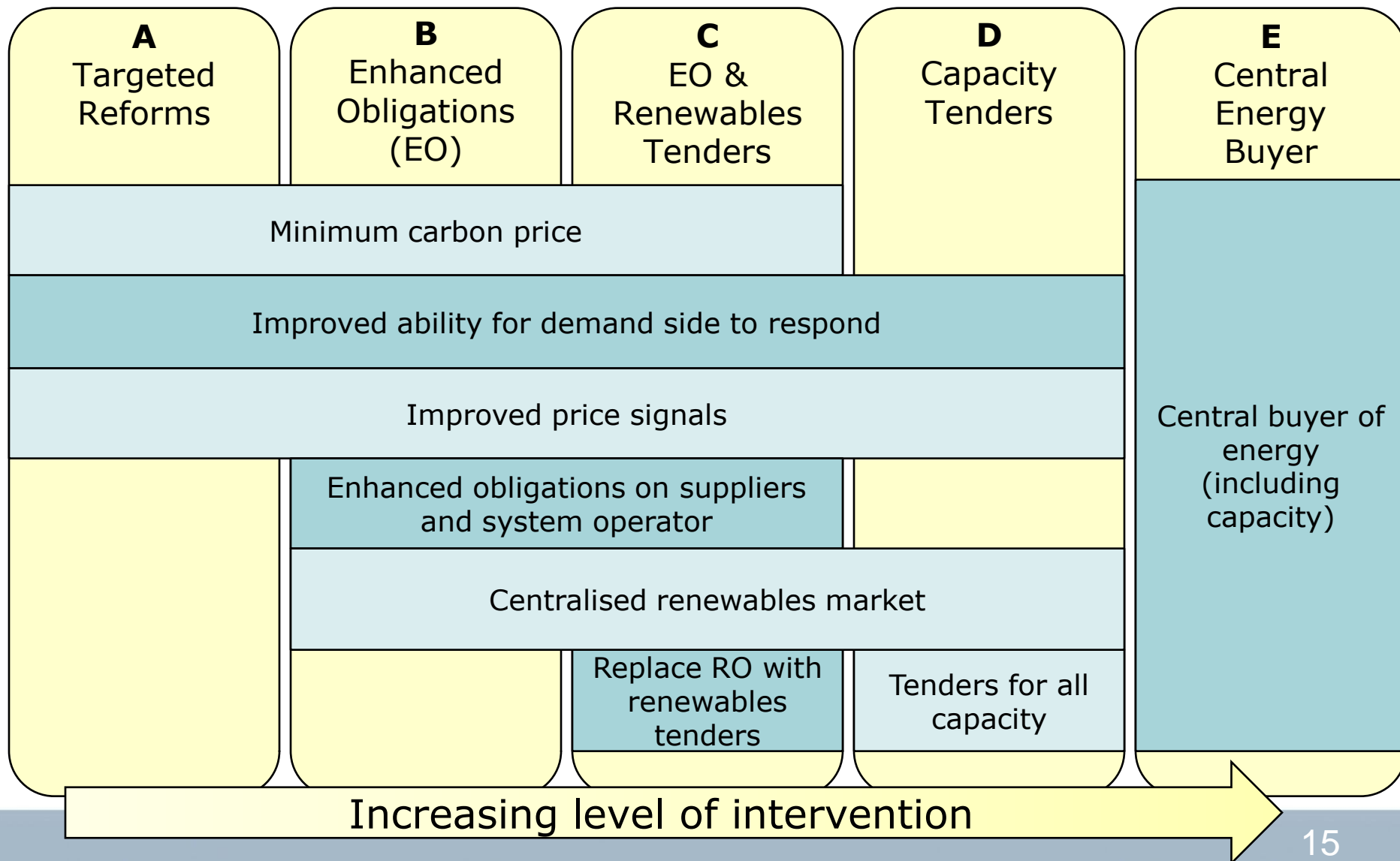
WHAT SHOULD WE DO ABOUT IT?

RANGE OF POSSIBLE POLICY MEASURES TO DEAL WITH ISSUES

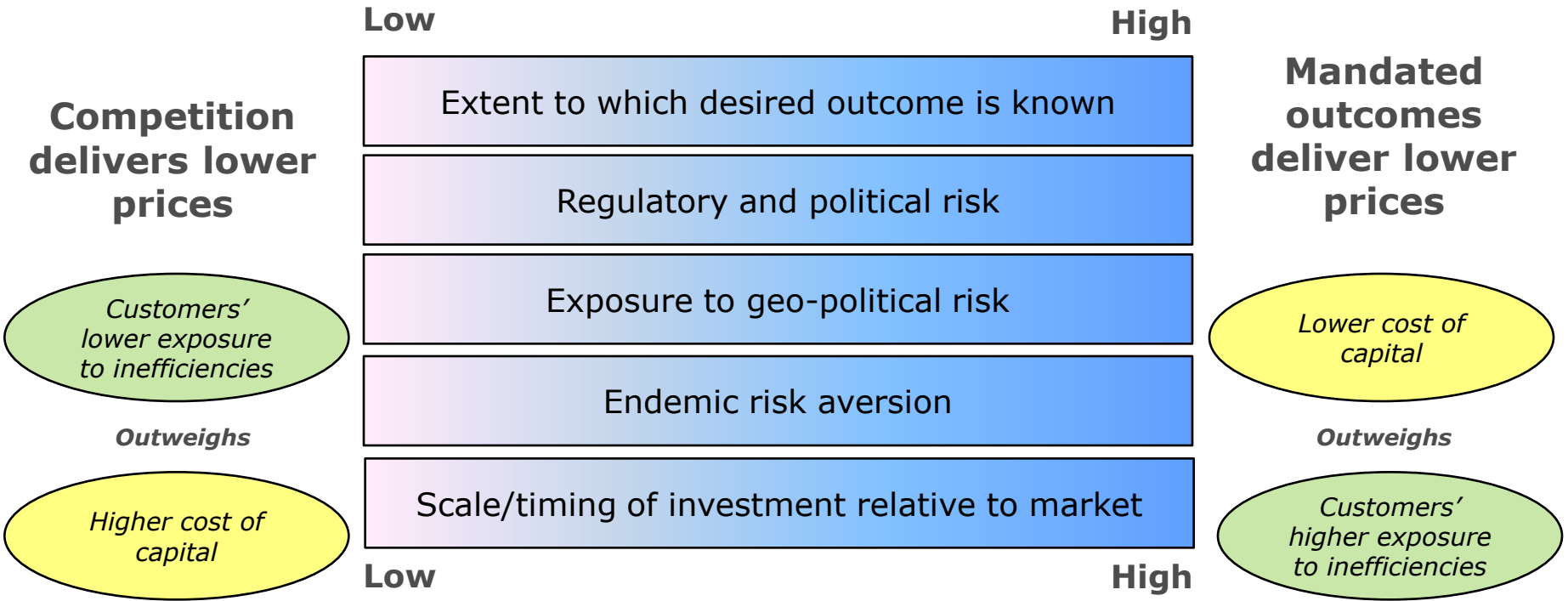
<p>Scale and timing of investment</p> <ul style="list-style-type: none"> • Improve price signals • Supplier obligations • Centralised renewables market • Capacity tenders • Central energy buyer 	<p>Uncertain future carbon price</p> <ul style="list-style-type: none"> • Carbon price intervention • Tender for low carbon plant • Central energy buyer
<p>Weakness of short term signals</p> <ul style="list-style-type: none"> • Improve price signals • Supplier obligations • Improve ability for DSR • Short term capacity auctions • Liquidity measures • Central energy buyer 	<p>Risks from inconsistencies with international arrangements</p> <ul style="list-style-type: none"> • Improve price signals • Supplier obligations • Storage capacity tenders • Central energy buyer

MEASURES CAN BE PACKAGED IN VARIETY OF WAYS

OPTIONS FOR CONSULTATION

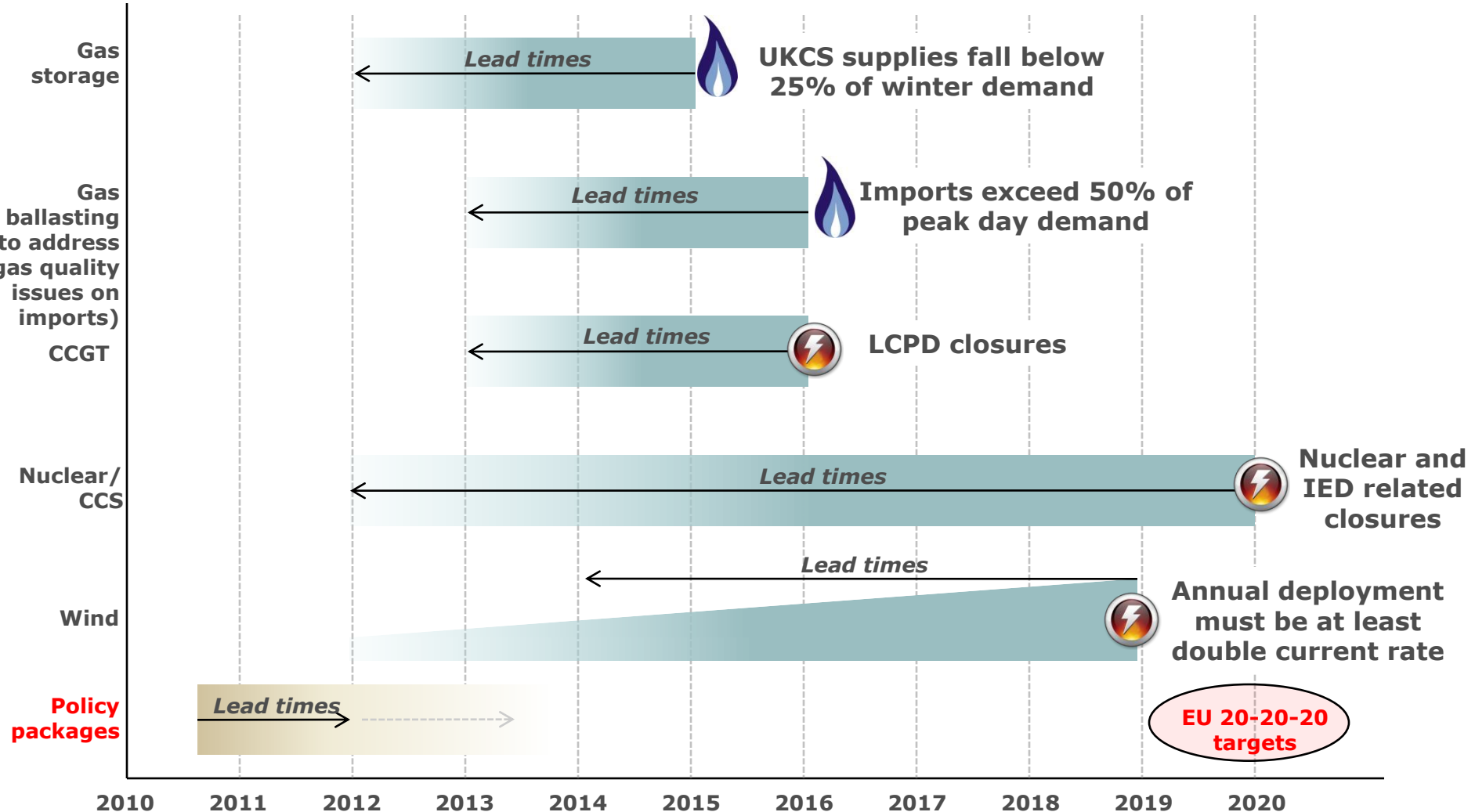


Trade-offs



TO WHAT EXTENT IS GOVERNMENT LIKELY TO WANT TO SHAPE OUTCOMES?

KEY TIMINGS



INVESTMENT DECISIONS NEED TO BE TAKEN IN NEXT 2-3 YEARS

NEXT STEPS

We welcome responses to this consultation by **31 March 2010**.

In particular, we are seeking respondents' views on:

- our appraisal of current arrangements;
- our policy packages and assessment of them;
- whether other policy measures should be considered;
- the extent to which early actions should be considered.

The findings of this project may provide useful input to the Government's coming Energy Market Assessment.

WE ARE INTERESTED IN YOUR VIEWS

- Formal written responses
- Email: project.discovery@ofgem.gov.uk
- To register your interest in participating in workshops or for one-to-one meetings contact:

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alex.lyon@ofgem.gov.uk

The background of the slide is a composite image. On the left, there are rows of solar panels under a bright sun. On the right, a hand is shown holding a white document. In the bottom left corner, a blue gas burner is visible. The overall theme is energy and customer service.

ofgem

Promoting choice and value
for all gas and electricity customers