



Promoting choice and value  
for all gas and electricity customers

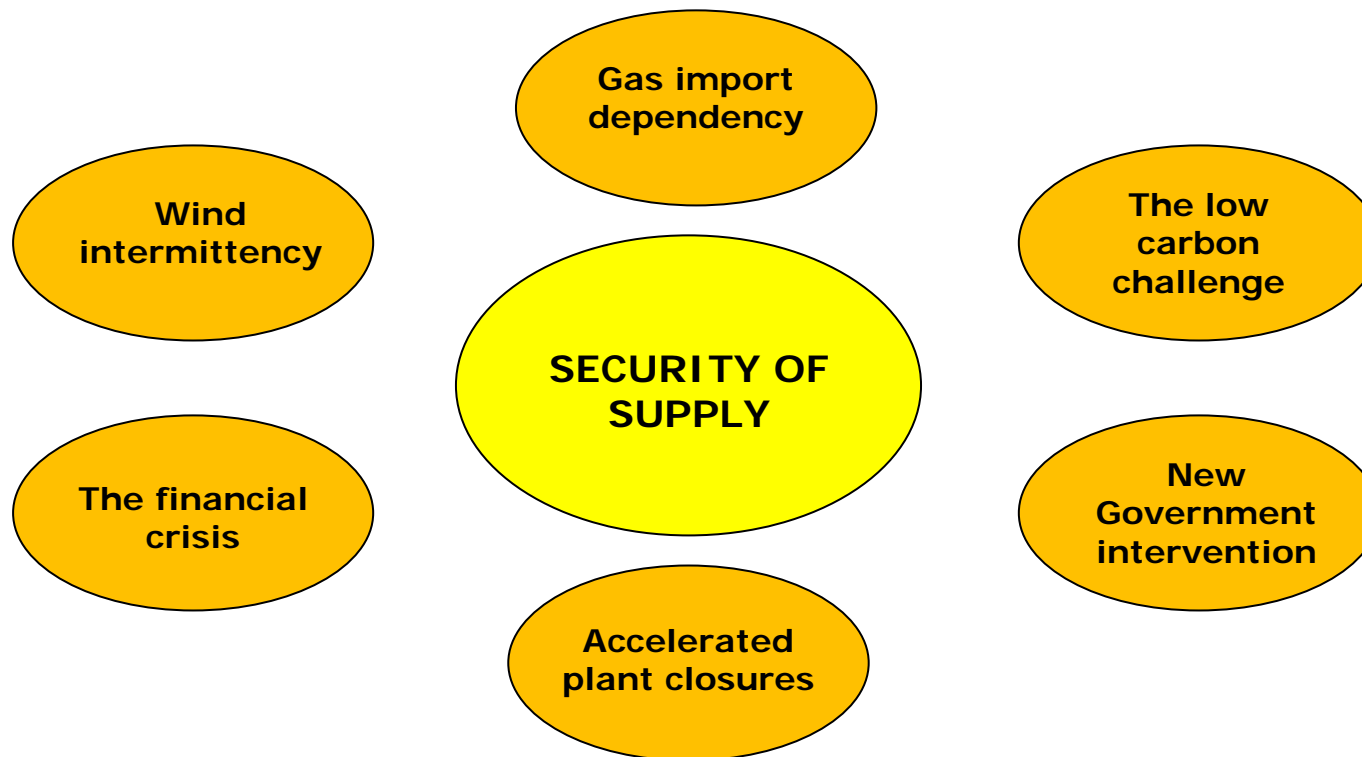
# Project Discovery

Gas Operational Forum, 24 March 2010

Ben Woodside

# PROJECT DISCOVERY

Can current arrangements in GB deliver secure and sustainable energy supplies?



LATEST COMPLICATION IS OUTCOME OF COPENHAGEN

## 3 Stages of Discovery

1. Scenario and stress test work
  - October consultation document
2. Appraisal of current arrangements
  - 5 key issues found
3. Possible policy measures to address key issues
  - 5 packages put forward

## OCTOBER CONSULTATION DOCUMENT

### Respondent feedback: themes

- There was overwhelming support for our approach to modelling uncertainty through scenarios and stress tests
- Respondents highlighted some key challenges for the security of energy supplies over the next 10-15 years, including:
  - regulatory uncertainty, especially for carbon limits and prices
  - financial crisis making it more costly to obtain funds
  - obstacles posed by building/planning requirements
  - renewable technology's relatively higher cost and variability
  - additional risks from oil price shock, gas quality and investment/construction delays

## FEBRUARY 2010 – UPDATE ON SCENARIOS

	<b>Green Transition</b>	<b>Green Stimulus</b>
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
Invt required:	£194bn	£190bn
	<b>Dash for Energy</b>	<b>Slow Growth</b>
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
Invt required:	£110bn	£95bn

## FEBRUARY 2010 – UPDATE ON STRESS TESTS

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"**

## KEY FINDINGS FROM THE APPRAISAL

<p><b>Finding 1:</b> 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.</p>	<p>Up to £200bn of investment required by 2020</p>
<p><b>Finding 2:</b> 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.</p>	<p>Significantly higher emissions or reduced capacity margins</p>
<p><b>Finding 3:</b> 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.</p>	<p>Greatest risk in scenarios with high gas imports &amp; wind generation</p>
<p><b>Finding 4:</b> Interdependence with international markets exposes GB to a range of additional risks that may undermine GB security of supply.</p>	<p>Greatest risk in scenarios with highest gas import dependence</p>
<p><b>Finding 5:</b> 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.</p>	<p>Consumer bills could rise by up to 50%</p>

**COMBINATION OF FACTORS CAUSES CONCERN**

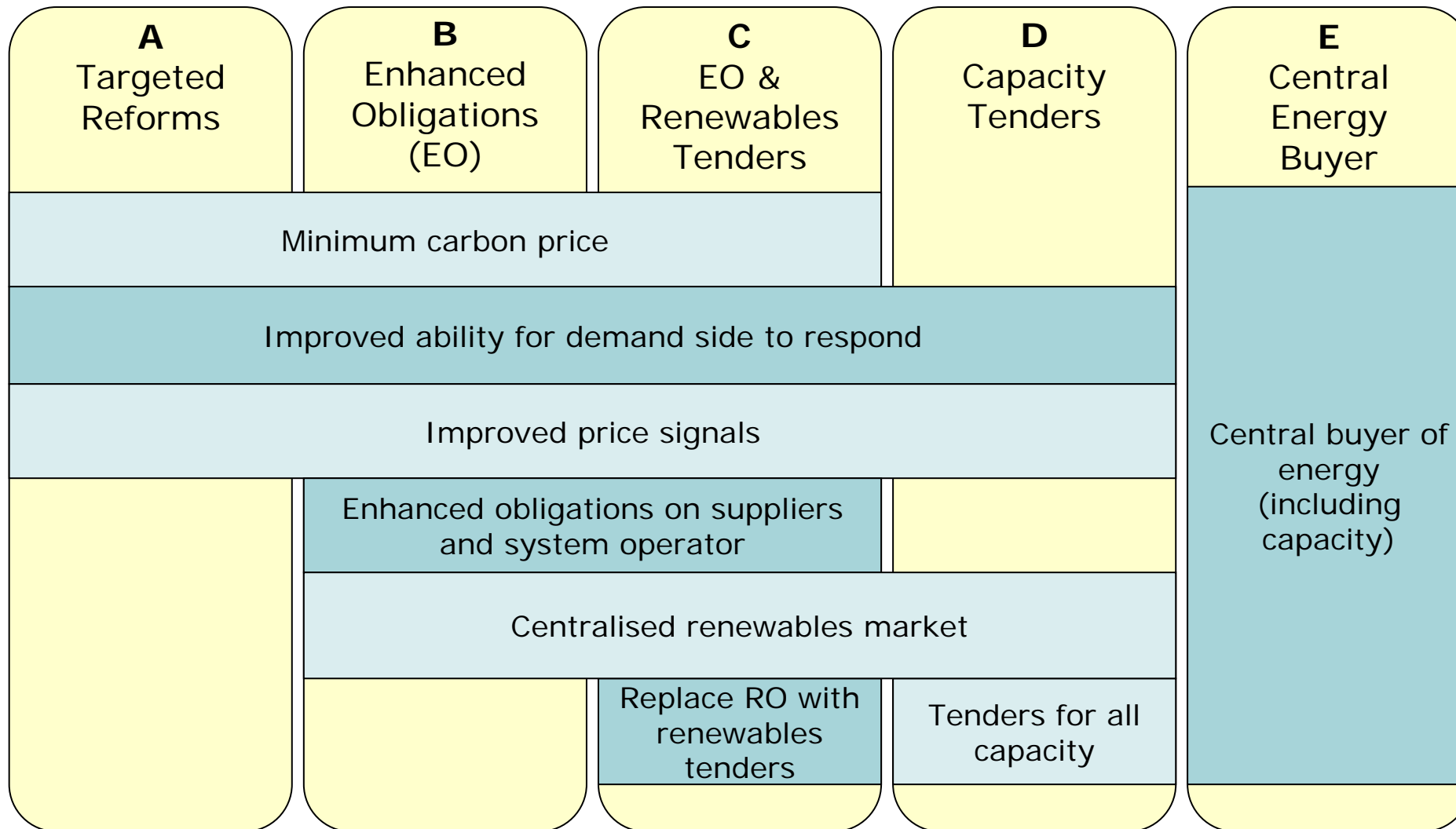
## RANGE OF POSSIBLE POLICY MEASURES TO DEAL WITH ISSUES

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

**MEASURES CAN BE PACKAGED IN VARIETY OF WAYS**



## OPTIONS FOR CONSULTATION

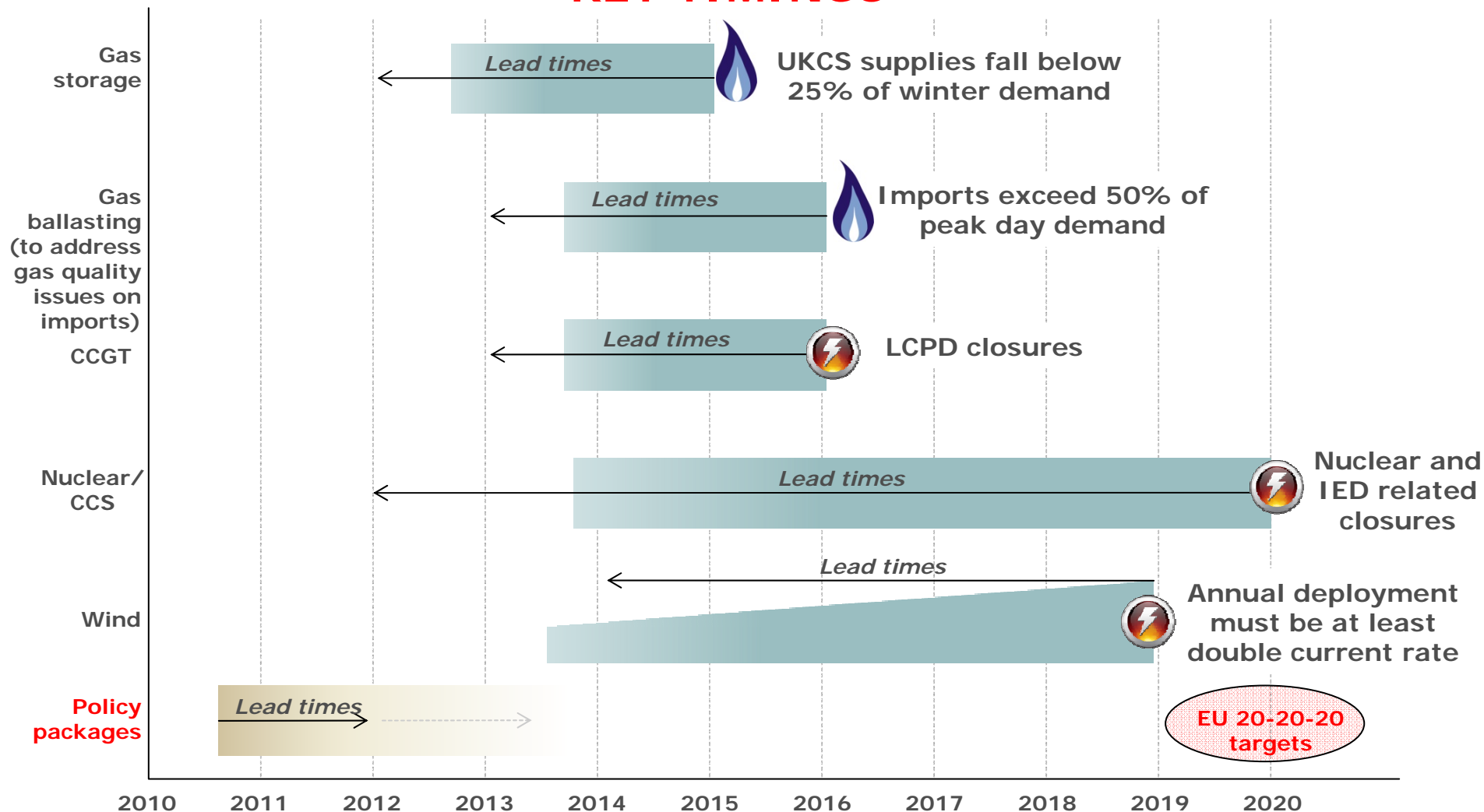


## KEY BENEFITS AND RISKS OF THE PACKAGES

	Key Benefits	Key Risks
Targeted Reforms	Increases incentives to invest whilst retaining the benefits of competitive markets	May not be sufficient to address the financing challenges and therefore deliver secure and sustainable supplies
Enhanced Obligations	Puts onus on industry players to deliver a specified level of security of supply	May not be sufficient to address the financing challenges and achieve renewables and climate change goals
Enhanced Obligations and Renewables Tenders	Puts onus on industry players to deliver a specified level of security of supply and enhances probability of efficiently meeting renewables targets	May not be sufficient to address all the financing challenges and achieve longer term climate change goals
Capacity Tenders	Facilitates raising finance thus accelerating investment in pre-determined levels and types of low carbon generation and storage	Customers exposed to risk of any poor decisions surrounding the type and scale of capacity required. Small-scale options and supply side may be overlooked
Central Energy Buyer	Underwrites long term contracts giving increased confidence of specific outcomes and access to lower cost finance	May stifle innovation and customers exposed to the risk of any poor contracting decisions  Existing European legal framework would limit what is possible under this approach

**TRADEOFFS EXIST ACROSS THE PACKAGES**

## KEY TIMINGS



**INVESTMENT DECISIONS NEED TO BE TAKEN IN NEXT TWO-THREE YEARS**

## There is not any update this month

If you have any questions please feel free to contact me anytime

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