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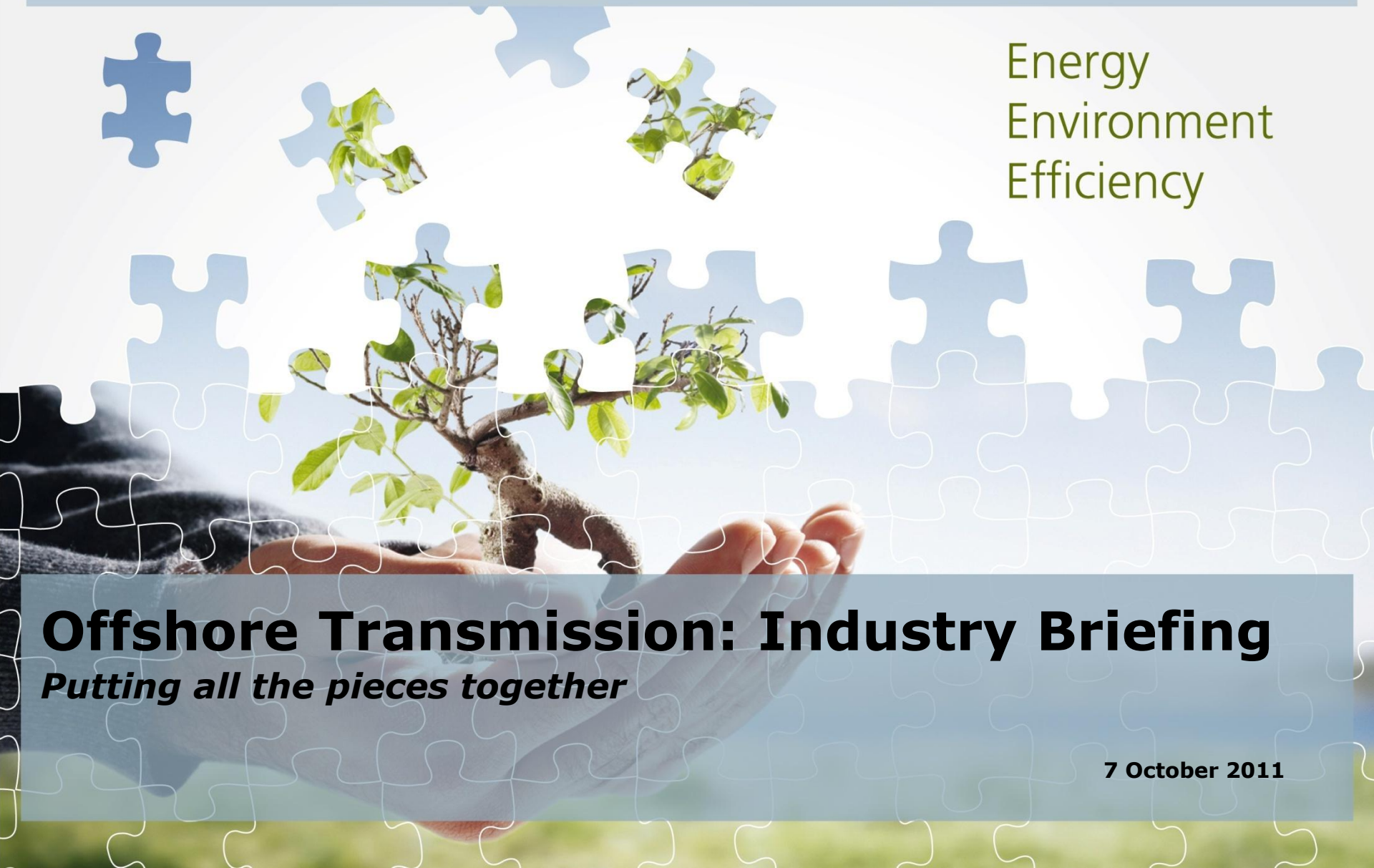

Offshore Transmission: Industry Briefing

Putting all the pieces together

7 October 2011

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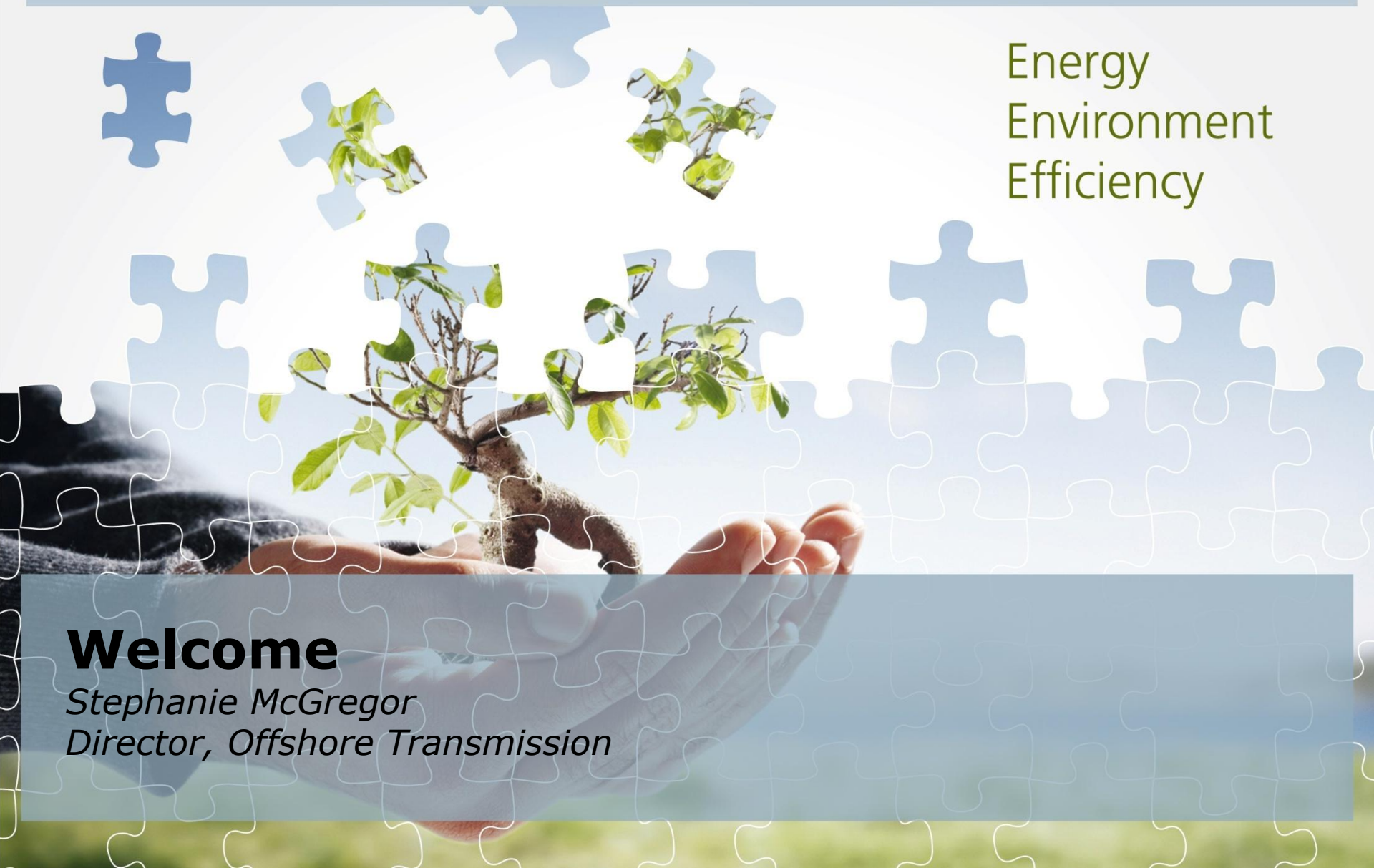

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Welcome

Stephanie McGregor
Director, Offshore Transmission

Event Programme

2.30	*Welcome*	*Stephanie McGregor, Director, Offshore Transmission*
	Transitional Update	*Steve Beel, Head of Tenders and Transactions*
	OFTO Licence Developments	*Colin Down, Senior Policy Analyst*
	Enduring Regime Development	*Mark Cox, Associate Director*
	Coordination	*Jon Parker, Senior Manager, Offshore Coordination Policy*
	Wider E-Serve Policy Update	*Bob Hull, Managing Director, Commercial*
3.35	*Q&A and Closing Remarks*	*Bob Hull, Managing Director, Commercial*
4.00	*Drinks and canapés*	

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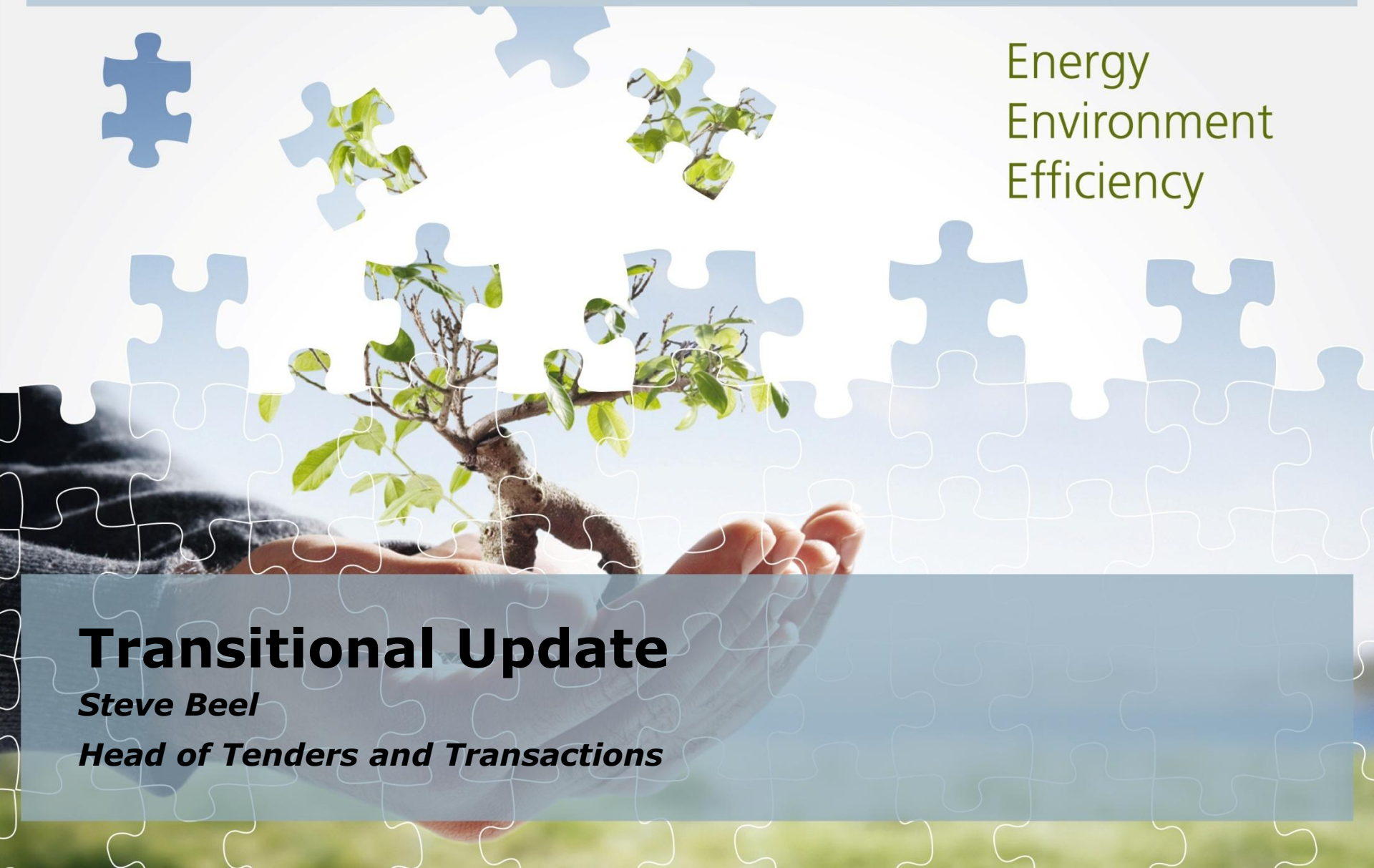


Transitional Update

Steve Beel

Head of Tenders and Transactions

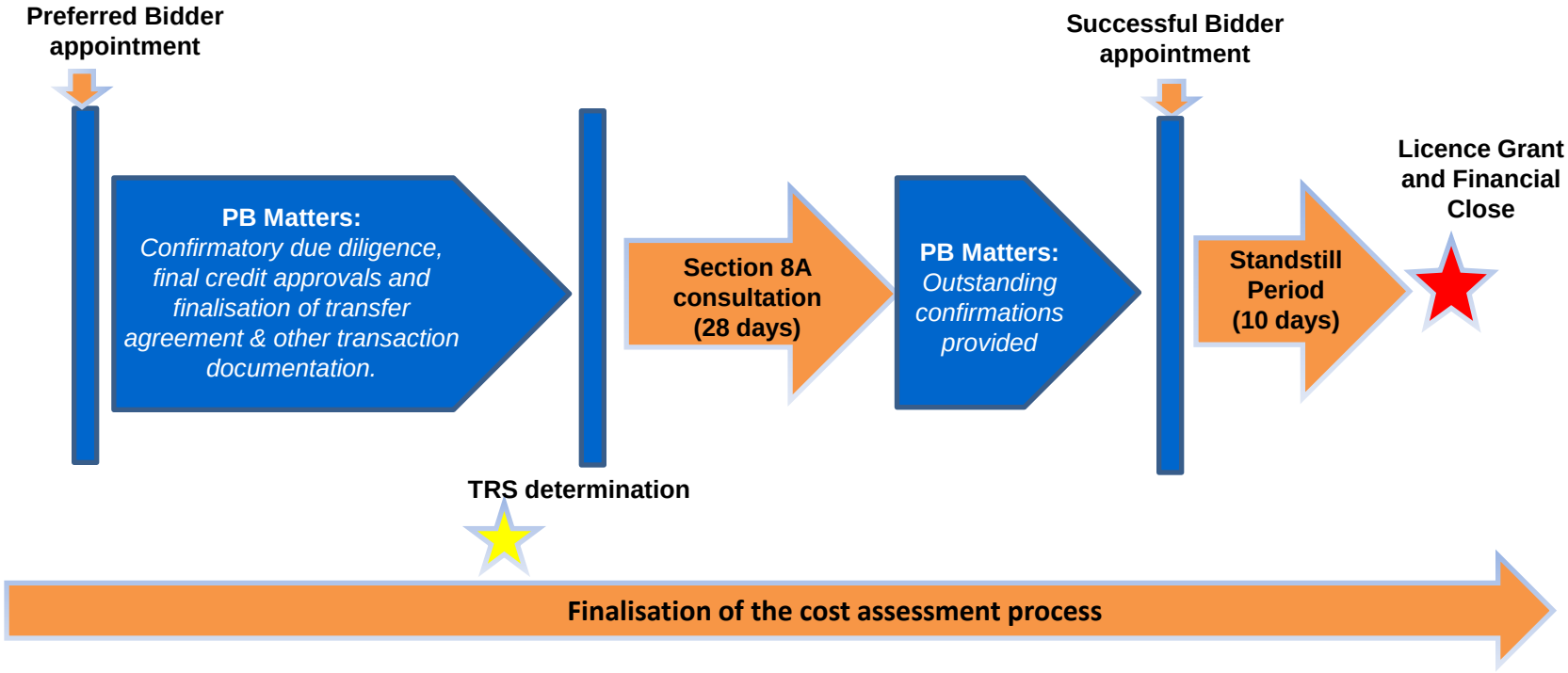
Transitional Round 1 – Projects completed

Project	OFTO	Final Transfer Value	OFTO Revenue	Licence Grant
Robin Rigg	All with consortium of: Transmission Capital Partners, Amber and International Public Partnerships Ltd Lenders: Barclays, Lloyds, BNP Paribas	£65.5m	£6.5m	Mar 2011
Gunfleet Sands		£49.5m	£6.0m	Jul 2011
Barrow		£33.6m	£4.8m	Sept 2011

Transitional Round 1 – Projects to complete

Project	Preferred Bidder	Final Transfer Value	Estimated Transfer Value	Status
Walney I	Macquarie and Barclays Infrastructure Fund	£105.4m		In Standstill – Licence Grant in Oct 2011
Walney II			£104.4m	Pre licence consultation
Sheringham Shoal			£182.2m	Pre licence consultation
Ormonde	Transmission Capital Partners		£101.1m	Pre licence consultation
Thanet	Balfour Beatty		£163.1m	Pre licence consultation
Greater Gabbard	Balfour Beatty/ Green Energy Transmission		£316.6m	Pre licence consultation

Process to Asset Transfer



- Clarity over property contracts
- Tender Revenue Stream process
- Market Rate Adjustment process
- Cost Assessment process
- Technical due diligence
- Establishing standardised documentation and solutions

Refinements to Process

- Stages of process and tendering principles from Round 1 largely adopted:

- Amendments for TR2A:
  - ✓ Earlier interaction between bidders/ developers – face to face sessions during ITT stage
  - ✓ ITT submission requirements:
    - Funding commitment of 9 months
    - Approach to technical due diligence
    - Responding to major failures
  - ✓ Other adjustments to ITT document to reflect feedback

Transitional Round 2 – qualifying projects

Humber Gateway (300MW £218m)

Race Bank (600MW c.£500m)

West of Duddon Sands (389MW £255m)

Lincs (250MW £282m*)

Gwynt-y-Mor (576MW £306m)

London Array (630MW £476m)

Tranche A Projects (Capacity, Initial Transfer Value)

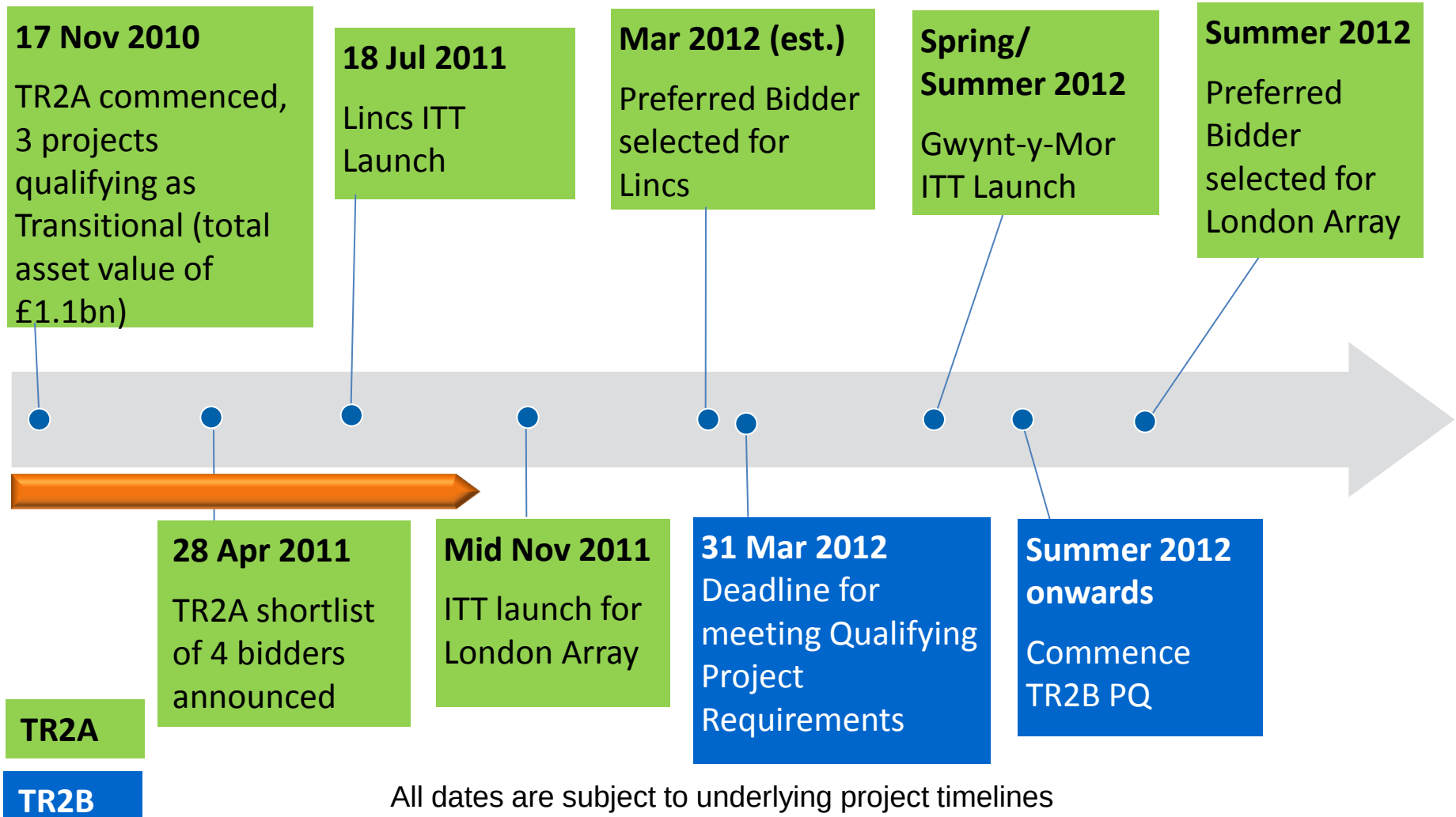
Expected Tranche B Projects (Capacity, Developer's Est. Transfer Value)

TR2A Shortlist:

- Balfour Beatty Equitix
- Blue Transmission (Macquarie Capital Group Ltd, Barclays Infrastructure Funds Management Ltd, Mitsubishi Corporation)
- National Grid Offshore Consortium (National Grid Offshore Ltd, Britel Fund Trustees, Universities Superannuation Scheme Ltd
- Transmission Capital Partners (Transmission Capital Partners Ltd, International Public Partnerships Ltd)

***Ofgem's estimate for purposes of ITT process**

Transitional Round 2 - key milestones



All dates are subject to underlying project timelines

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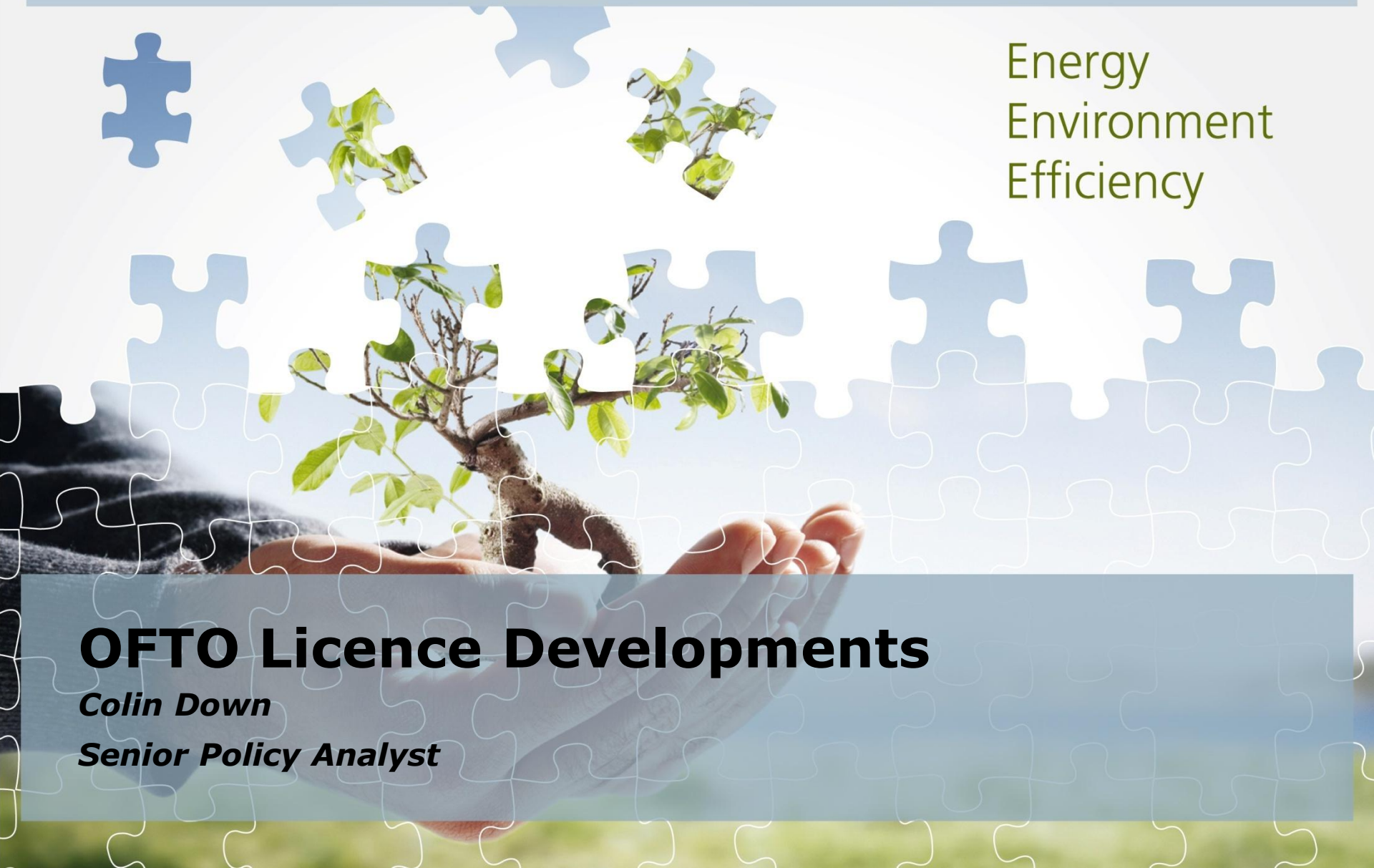

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OFTO Licence Developments

Colin Down

Senior Policy Analyst

Overview of the regulatory framework

Low Risk Revenue Stream

- 20 year revenue stream
- availability based
- no automatic periodic regulatory review
- no construction, energy or stranding risk, low counterparty risk – no generator exposure
- well defined and proven regulatory regime – extending onshore precedent
- well defined tender process

Revenue Adjustments

- availability incentives and penalties capped at 10% of revenue
- post-construction revenue adjustments to reflect final transfer value
- revenue fully indexed to RPI
- cost pass through and pre-defined adjustments for Ofgem costs etc
- incremental capex up to cumulative 20%
- possible extension or re-tender at the end of the revenue stream

Availability consultation

Simplification:

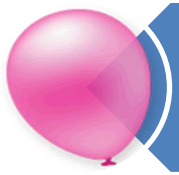
The incentive weighting mechanism

Simplification:

Apply credits at the same time as penalties

Responses supportive – have implemented for TR2

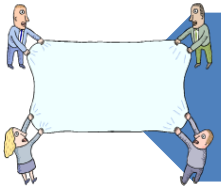
Other Changes



Inflation

Flexibility in E12 – C4 compliance officer

Third Package Certification



OFTO of Last Resort Guidance

Various housekeeping changes

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Enduring Regime Development

Mark Cox

Associate Director, Offshore Transmission

Recap – what is the Enduring Regime?

- Enduring Regime framework in place
- Consultations on the development of the Enduring Regime were undertaken in 2009 and 2010 – changes made to the regulatory framework in December 2010
- The key changes were amendments to parts of the standard industry framework, to allow Generator build or OFTO build
- Under the Transitional Regime assets are built by the generator
- Under the Enduring Regime assets are built by the OFTO ***or*** the generator
  - Generator build
  - OFTO build (early or late)
- Last date for projects to qualify under transitional regime:
  31 March 2012

Enduring Regime windfarm projects

- 22 separate offshore windfarms:
  - 5 remaining Crown Estate Round 2 projects;
  - 3 Crown Estate Round 2.5 projects (extensions to current windfarms);
  - 9 separate Crown Estates Round 3 zones assigned to developers;
  - 5 windfarms in Scottish territorial waters.

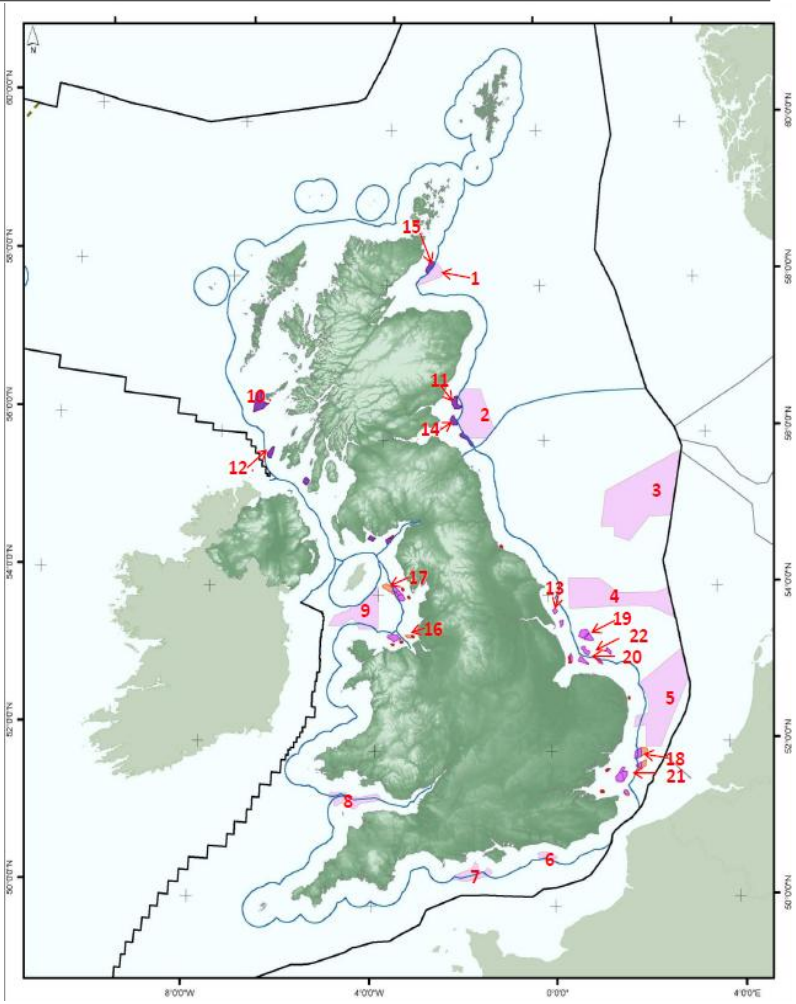
- Connection agreements in place for all but 3 projects, total of c.28GW
  - Transitional regime projects: 4.8GW, £3.2bn

- Range of developers and developer structures
  - TR1/TR2 players (Dong, Centrica, etc)
  - new players (eg SmartWind, Eneco, EDPR)

Possible Future Enduring Projects

Zone	Name
1	Moray Firth
2	Firth of Forth
3	Dogger Bank
4	Hornsea
5	East Anglia
6	Southern Array
7	West Isle of Wight
8	Atlantic Array
9	Irish Sea
10	Argyll Array
11	Inch Cape
12	Islay
13	Westermost Rough
14	Neart na Gaoithe
15	Beatrice
16	Burbo Bank ext.
17	Walney ext.
18	Greater Gabbard ext.
19	Triton Knoll

Zone	Name
20	Docking Shoal
21	London Array (Phase 2)
22	Race Bank



Differences in Enduring Projects

- Enduring Projects are generally larger and further offshore than most transitional projects
- Use of HVDC technology
- Phased builds
- Greater inter-connectivity within (and potentially between) projects

What are we doing next

- Current focus is to consider what refinements may be needed to support:
  - the OFTO build model, e.g. tender regulations, processes, incentives and licences will need to be tailored
  - phased developments, e.g. within zones
  - any developments from the coordination project
- Expect to consult end of year

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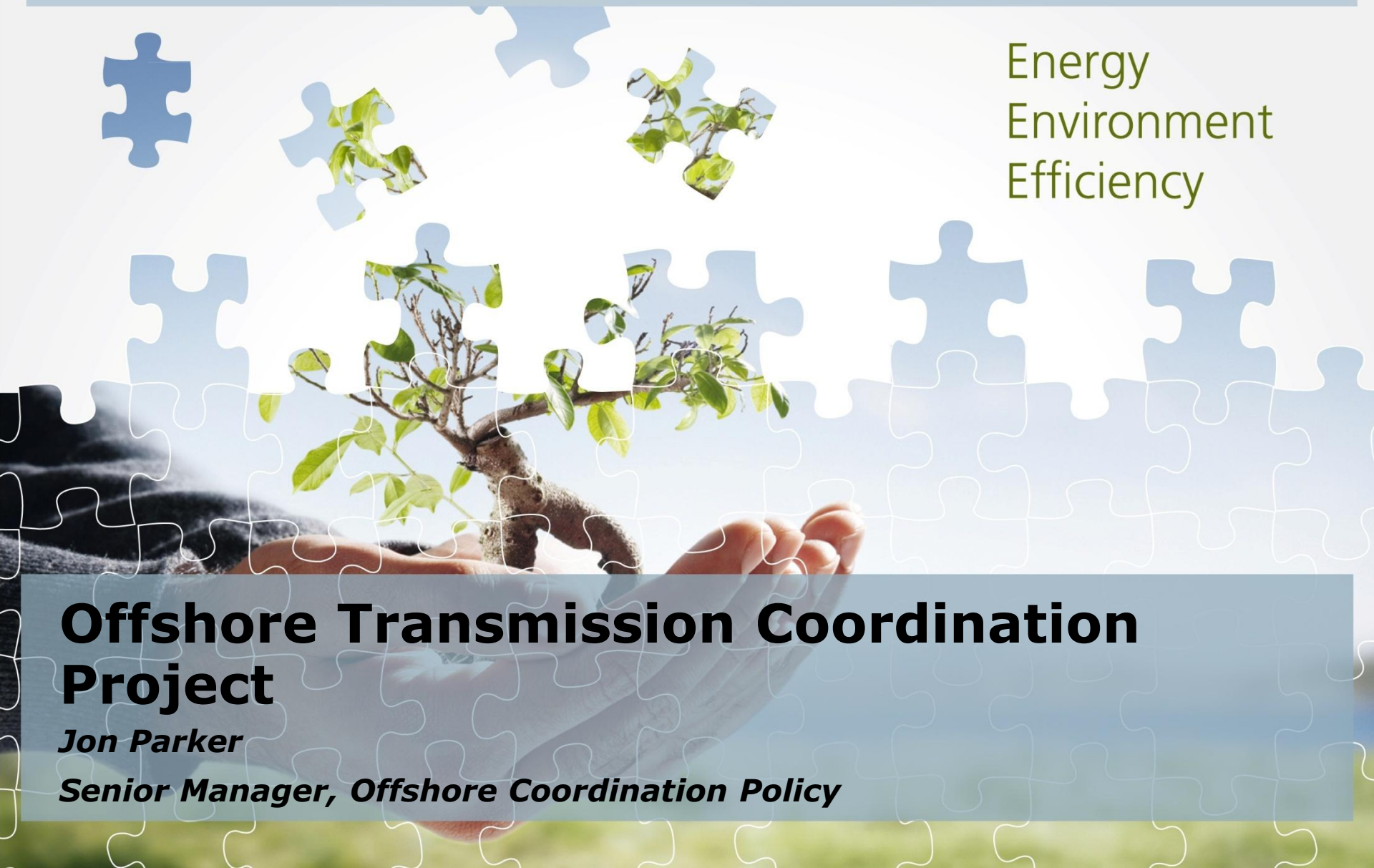


Offshore Transmission Coordination Project

Jon Parker

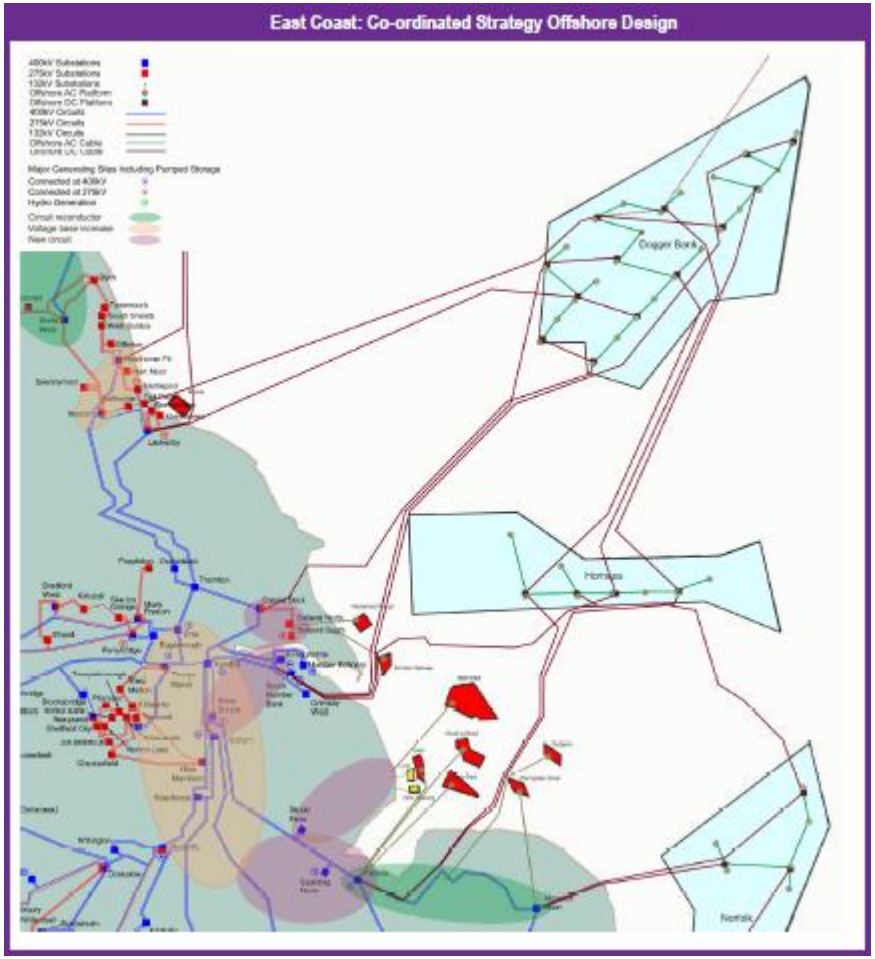
Senior Manager, Offshore Coordination Policy

Project Overview

- Joint Ofgem and DECC Coordination Project - a response to industry feedback:
  - assessing potential costs, risks and benefits that may arise from the development of a co-ordinated offshore and onshore electricity transmission network;
  - considering whether additional measures would be required to deliver co-ordinated networks and, if so, how these measures might work in practice.

- Taken together, the enduring regime and the Coordination Project will ensure that we deliver fit for purpose transmission infrastructure to connect future offshore generation and meet GB's long-term strategic needs.

What is meant by 'coordination'?



Source: ODIS 2011

It depends on the context:

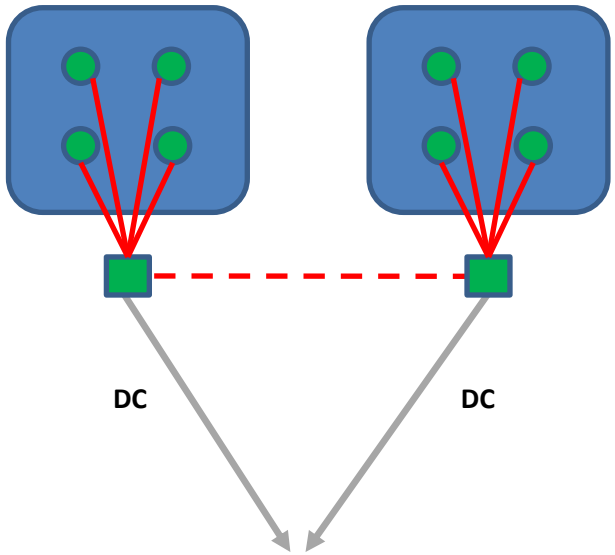
- Opportunities to coordinate will differ across projects:
  - Interconnection within zones;
  - Interconnection between zones;
  - Interconnection between countries;
  - Interconnection to mitigate need for onshore reinforcements
- Straightforward radial (point-to-point) connection will still be the best solution in some cases
- Requirements and opportunities for coordination will change over time;

Network development needs to be flexible to future demands

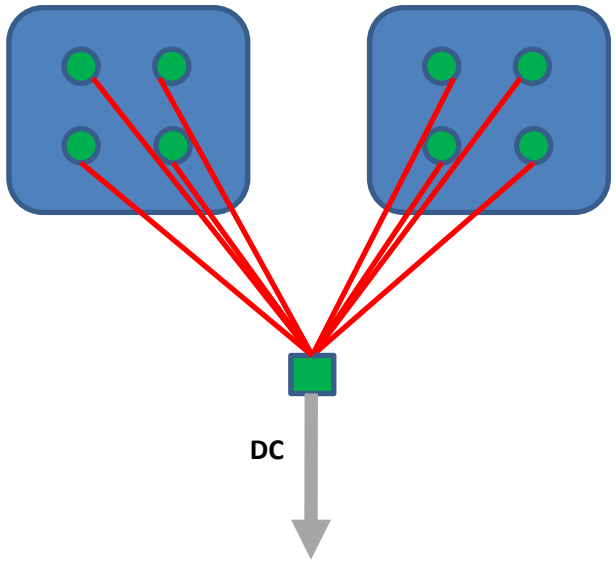
Intra-zone development

- Connection of existing offshore wind farms relatively simple – connected on radial basis
- Crown Estate Round 3 Projects – potentially greater capacity in deeper waters. Different connections are possible

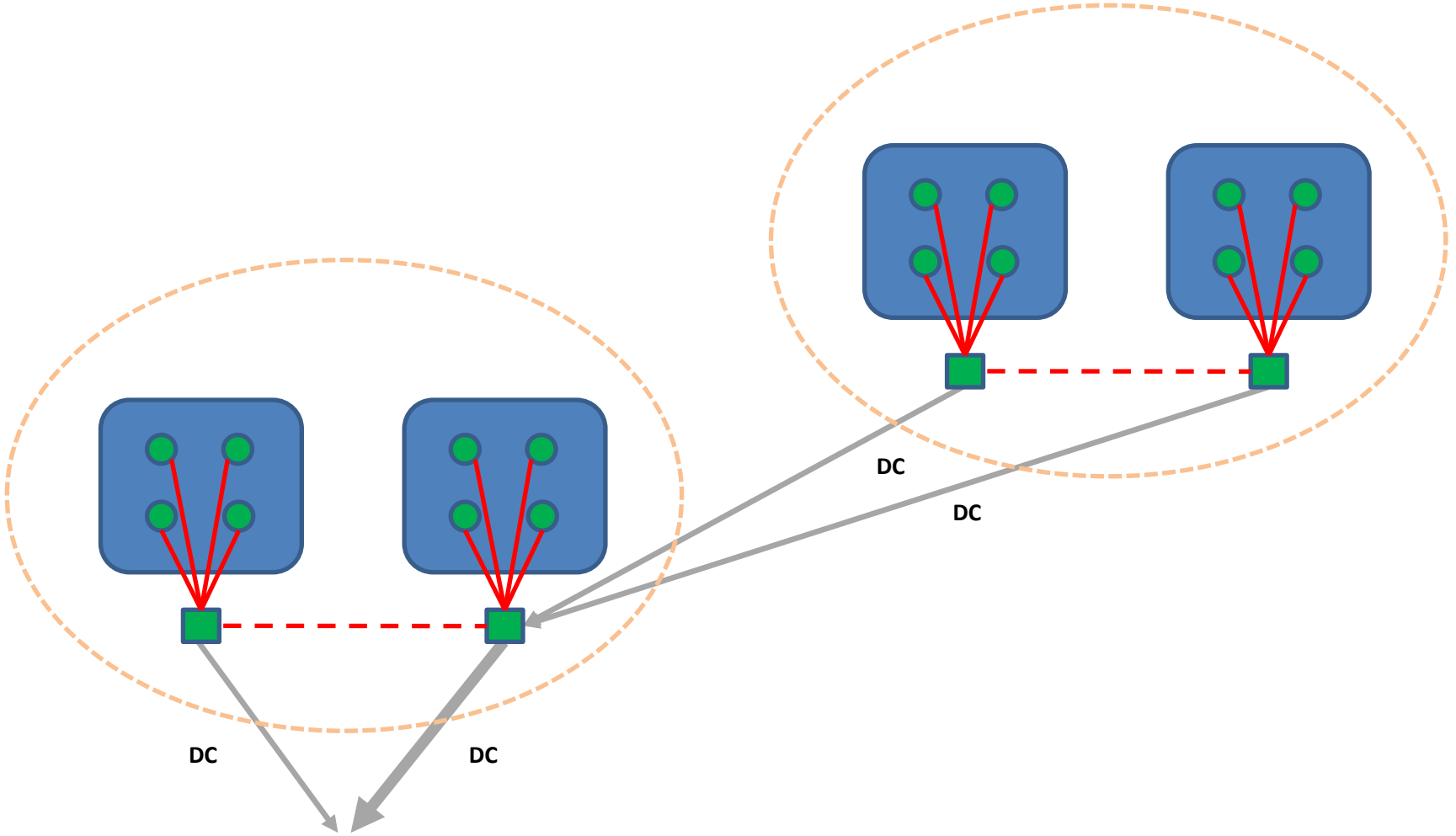
Radial:



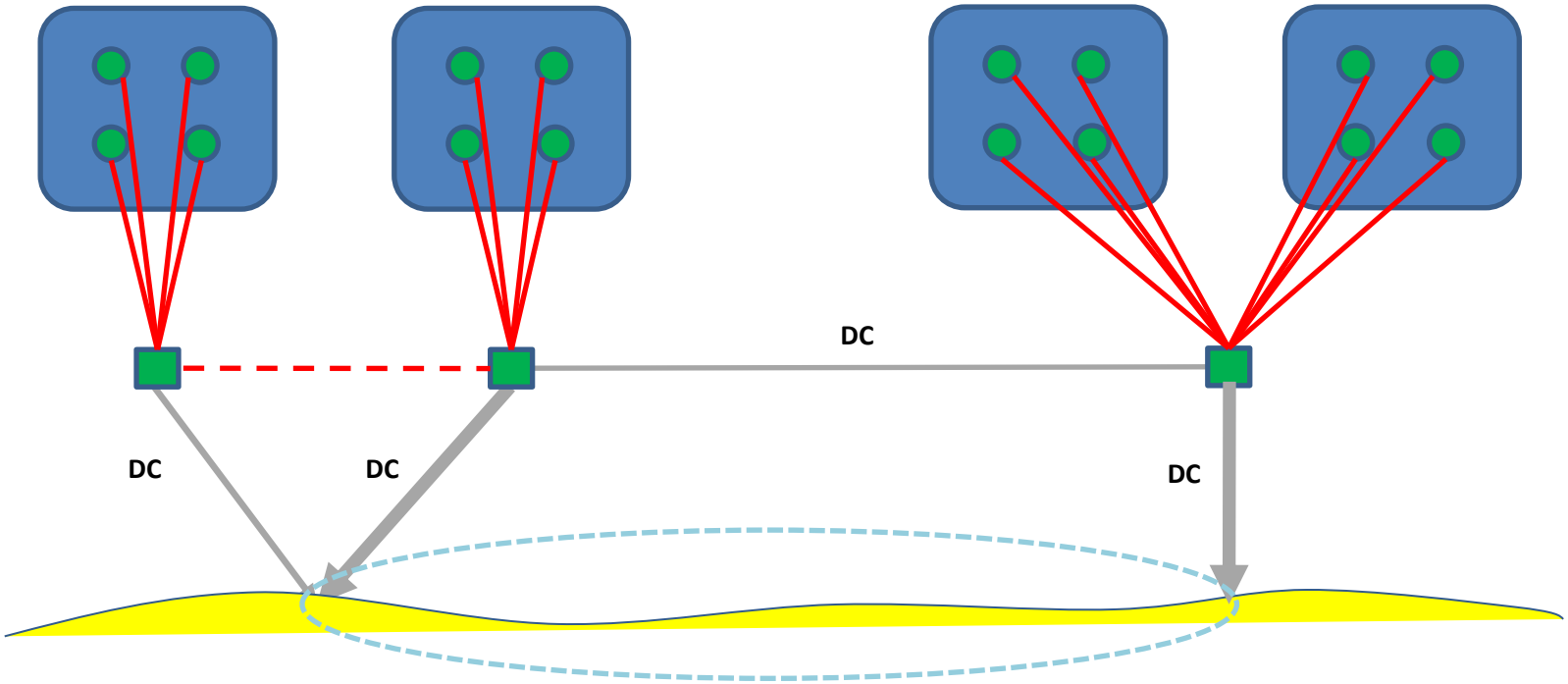
Radial plus:



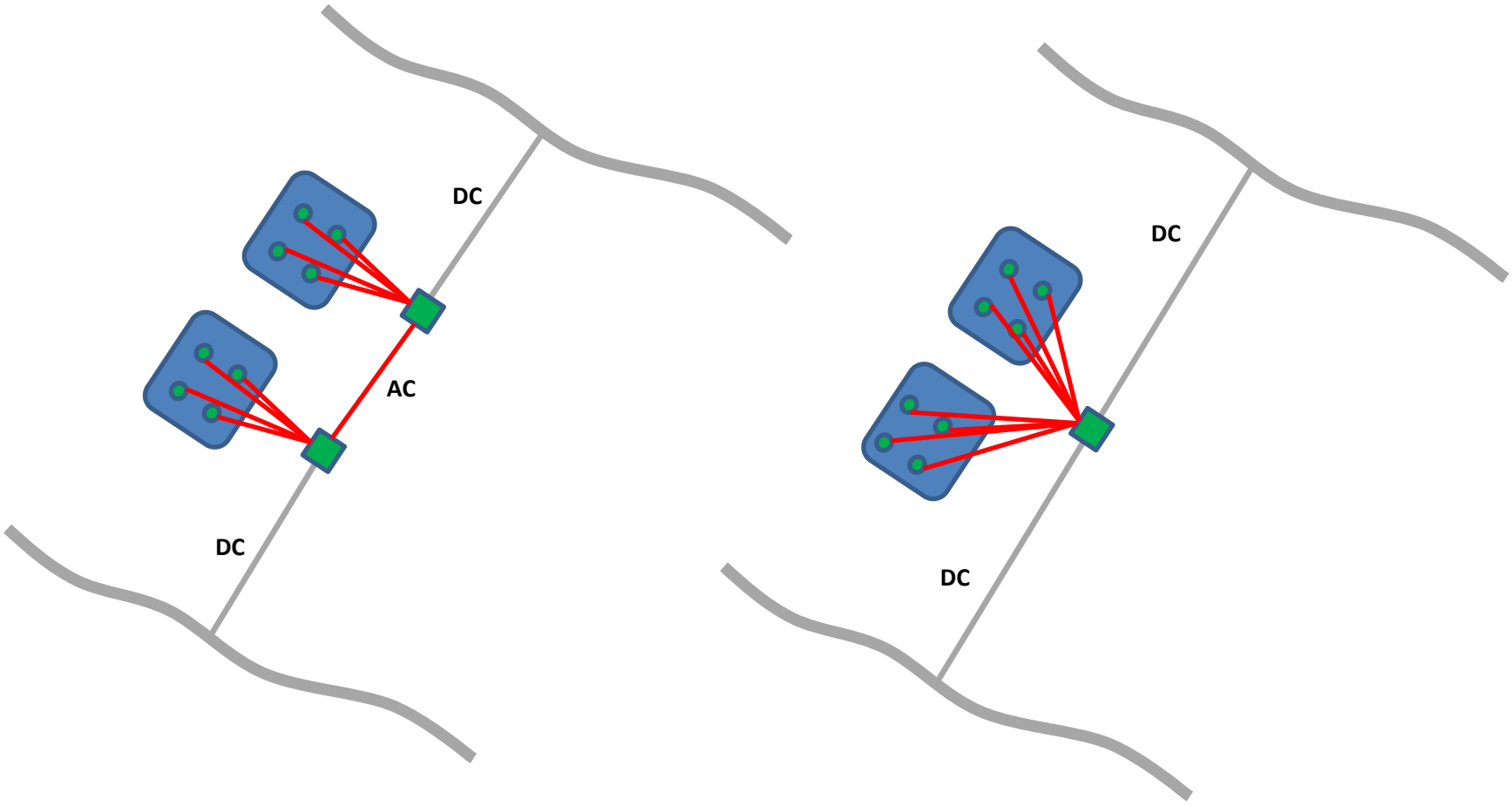
Inter-zone development



Supporting Onshore Network



International Interconnectors



Project Approach

- We have appointed two consultants to support our analysis.

- TNEI/PPA Energy are assessing asset delivery issues, including:
  - What grid configurations are likely to be efficient under different scenarios;
  - Assessing the key associated issues, uncertainties and risks.

- Redpoint Energy is undertaking a review of the current regulatory framework and commercial incentives to understand:
  - Where there might be barriers to coordinated outcomes;
  - What policy/regulatory changes may be able to address these.

- Plan is to publish the consultants' reports in November for comment

- DECC/Ofgem will then publish an Interim Conclusions Report for consultation in the winter.

Headline issues – network configuration

- Understanding the dynamic evolution of the network is extremely important to both the enduring regime and the Coordination Project.
- There are potential benefits from a more coordinated approach:
  - Reduced capital costs;
  - Reduced need for congestion payments;
  - Reduced environmental impact.
- However, there are uncertainties and risks associated with coordinated network scenarios, including:
  - Uncertainty over the timing and level of build-out of offshore generation;
  - Environmental impact could be higher than necessary if assets oversized but then not subsequently used;
  - Savings dependent on emergence of new technologies;
  - Potential increased complexity and network security impacts for generators.

Case by case approach will be important – no one size fits all

Headline issues – regulatory framework

- The stakeholder engagement process and our consultants' work has also highlighted a number of factors that may create a barrier to coordinated network outcomes:
  - process for anticipatory investment
  - consenting
  - process for determining what is the efficient network design
  - risks and incentives relating to making coordinated investments
  - regulatory treatment of links between offshore transmission and interconnectors
  - need for technology standardisation

Stakeholder Engagement

- Upcoming engagement activities:
  - 5th Expert Workshop – 14 October 2011
  - 6th OTCG – 1st November 2011
- In addition:
  1. regular email and website updates to stakeholders;
  2. bilateral meetings held with stakeholders/ stakeholder groups.

For further information, email: **offshorecoordination@ofgem.co.uk.**

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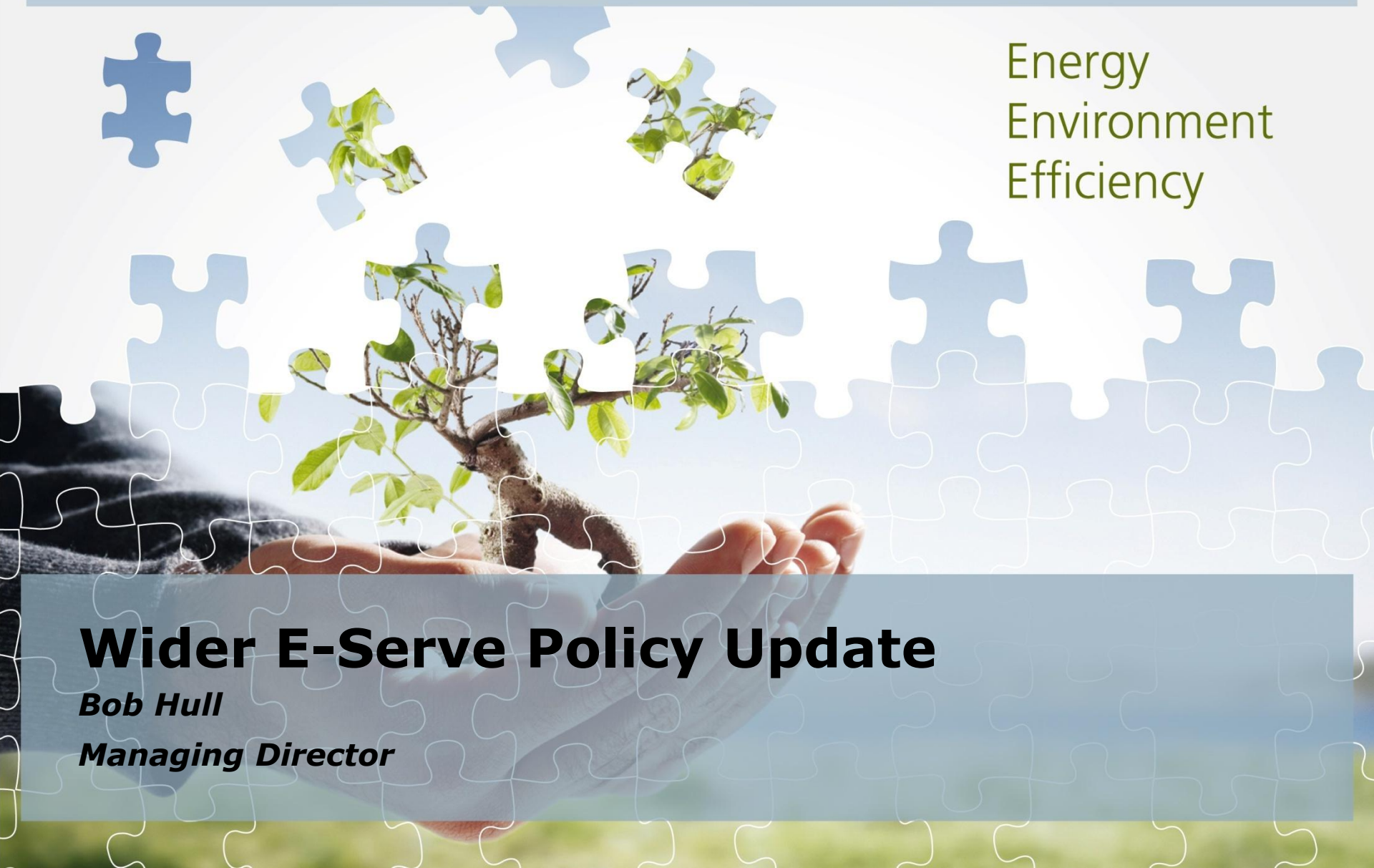

Wider E-Serve Policy Update

Bob Hull

Managing Director

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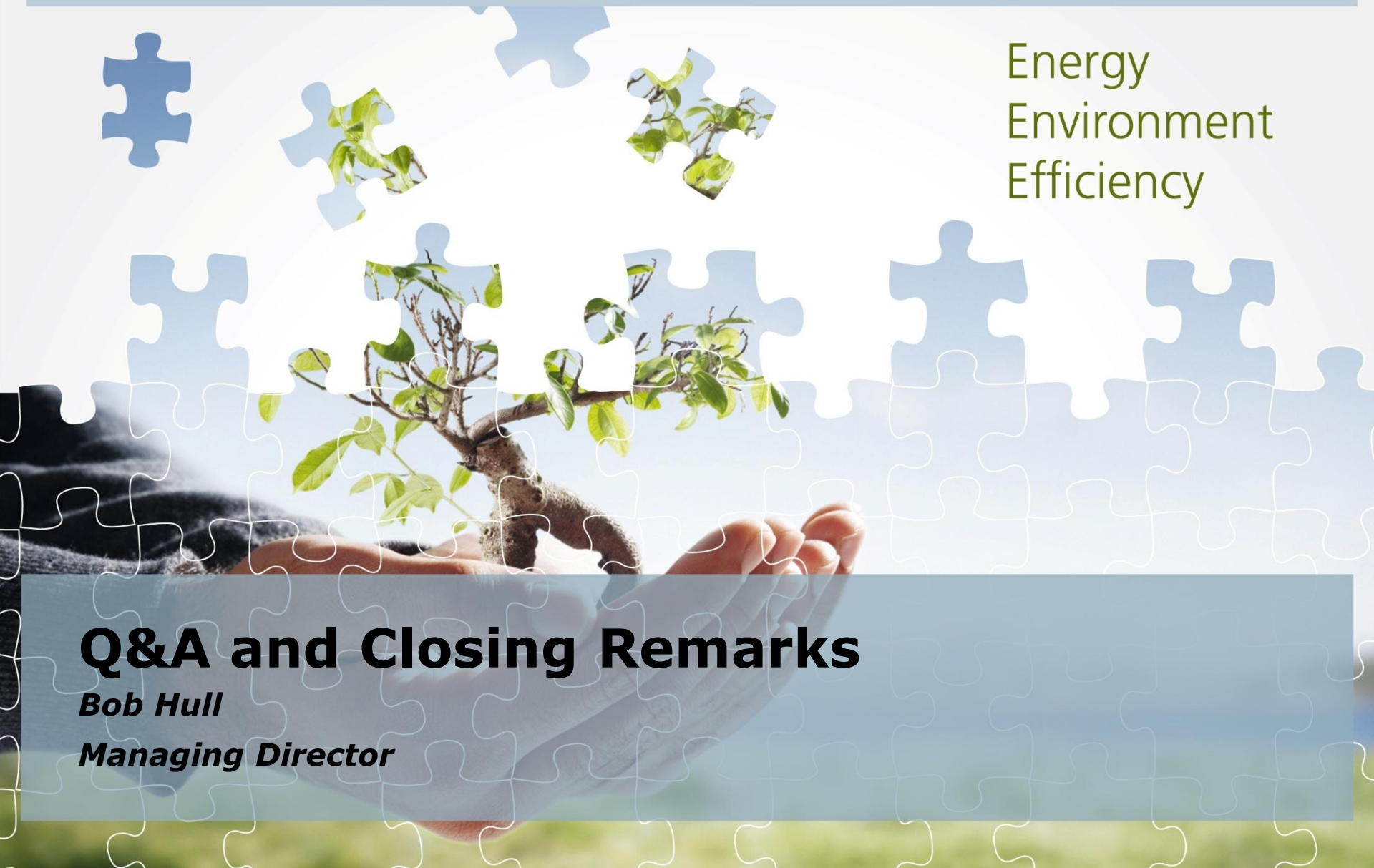

Q&A and Closing Remarks

Bob Hull

Managing Director


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