



Take-or-pay contracts for Renewables Deployment

Cambridge, December 15, 2006

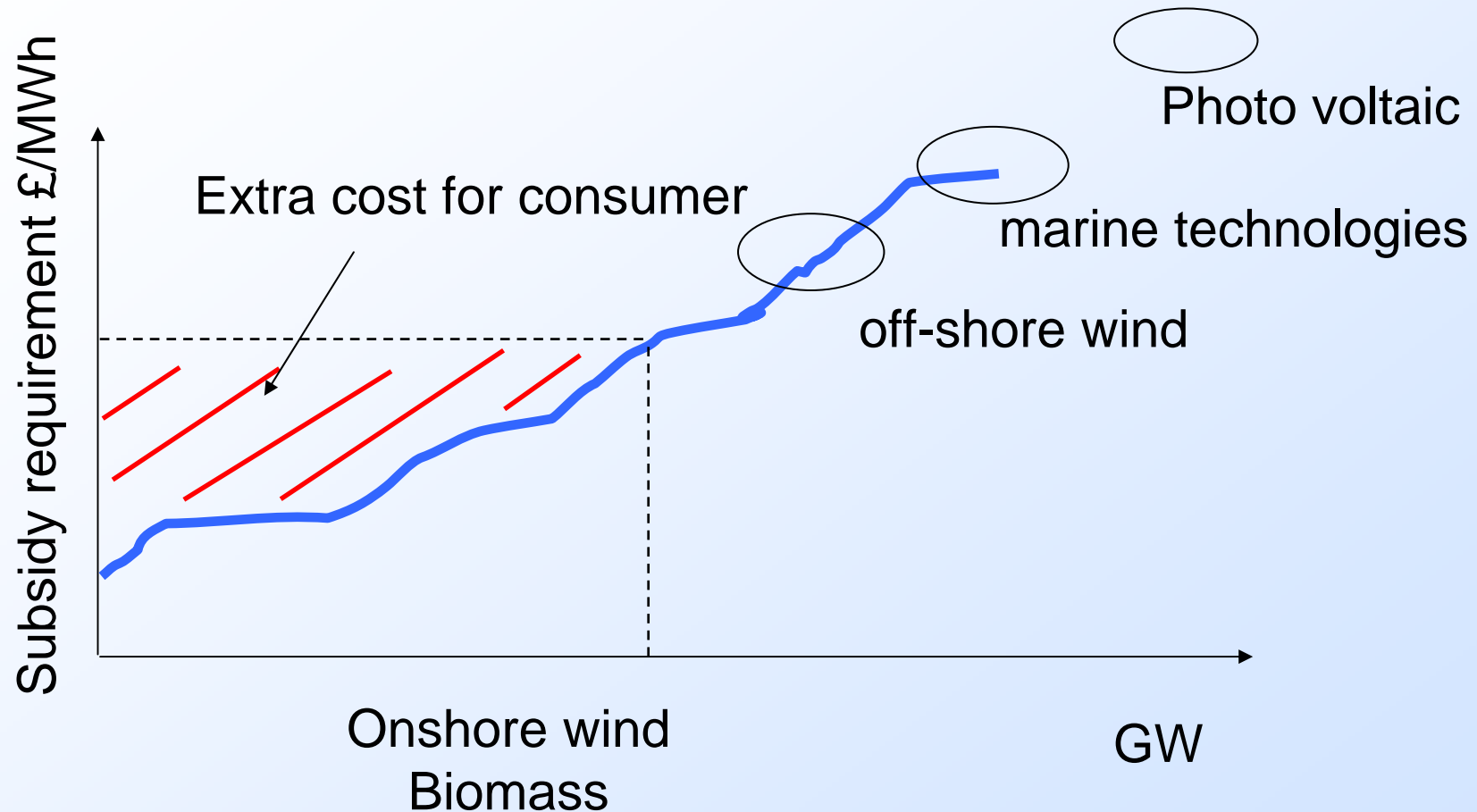
Angus Johnston, Amalia Kavali, Karsten Neuhoff
Cambridge University

www.electricitypolicy.org.uk/tsec/2

Take-or-pay contracts for Renewable Deployment

- The current scheme
 - Infra-marginal rents
 - Regulatory risks
- Long-term take-or-pay
 - Quantification and transition
 - Structure, counter-party, price formation
- How did we get there? – legal considerations
 - Fundamental rights law (right to property)
 - EC law on the free movement of goods
 - EC State aid law
 - Antitrust law

Current debate of renewables review - Banding



Differentiate payments for different resources/technologies:

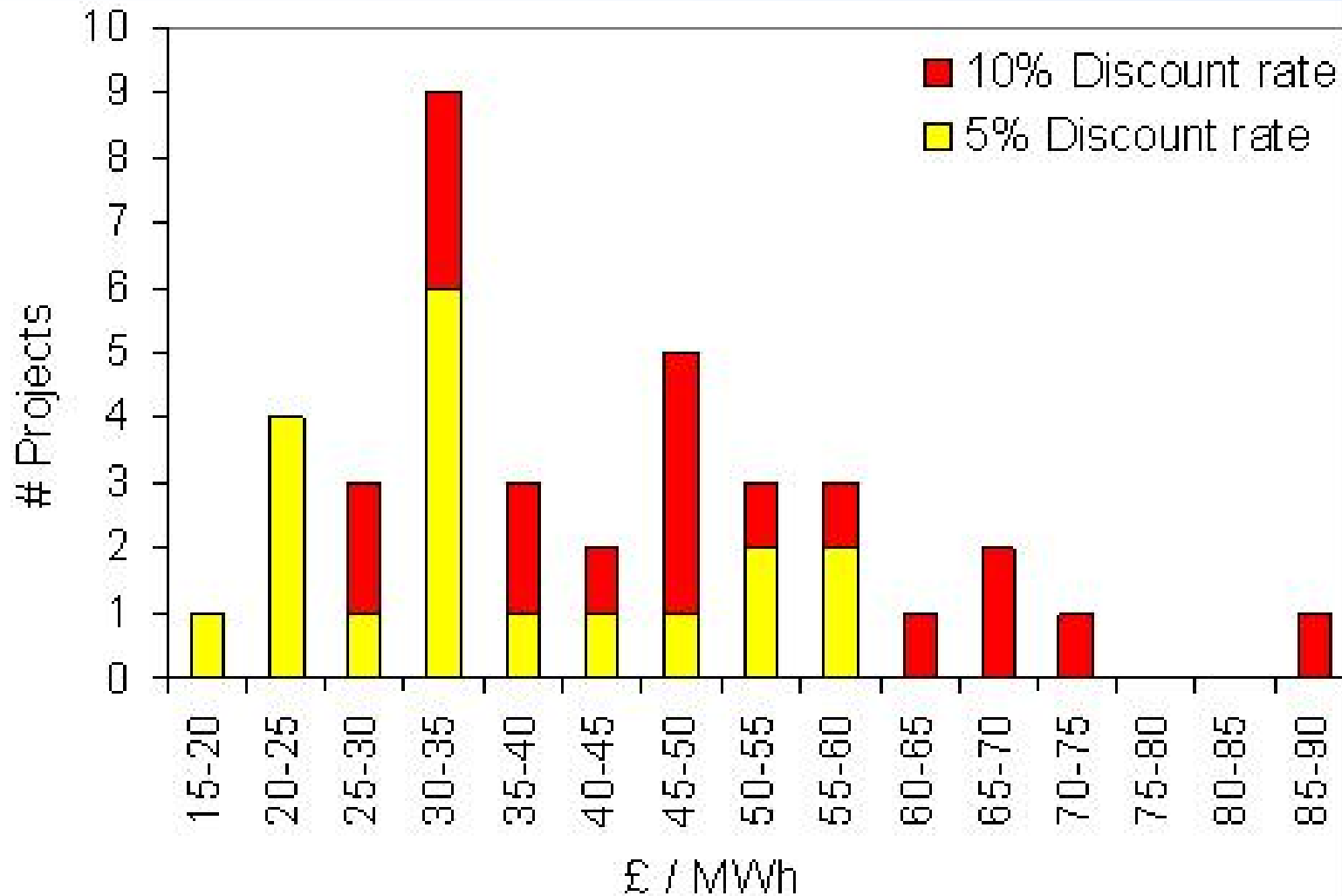
- Reduces transfers to infra-marginal technologies
- Allows support of technology portfolio

Estimated generation costs on-shore wind power

Windspeed (m/s)	Cost Of Generation 2005 (£/MWh)		
	Maximum (£/MWh)	Average (£/MWh)	Minimum (£/MWh)
5.5	85.4	76.3	71.5
6	69.8	62.1	58.5
6.5	68.3	61.2	57.2
7	59.5	53.0	49.8
7.5	52.7	47.3	44.1

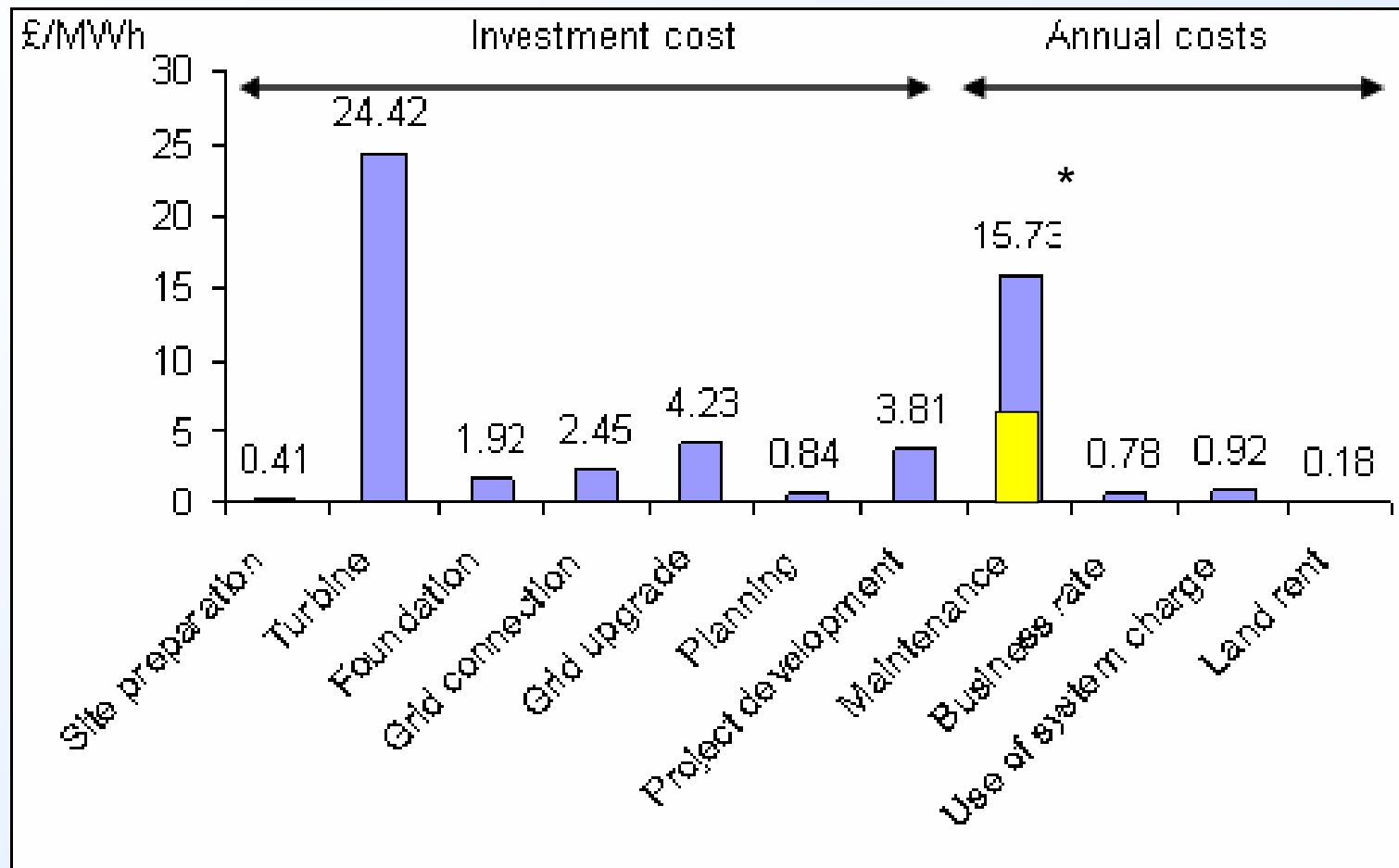
Source: Enviro (2005)

Compared to project costs from IEA 2005



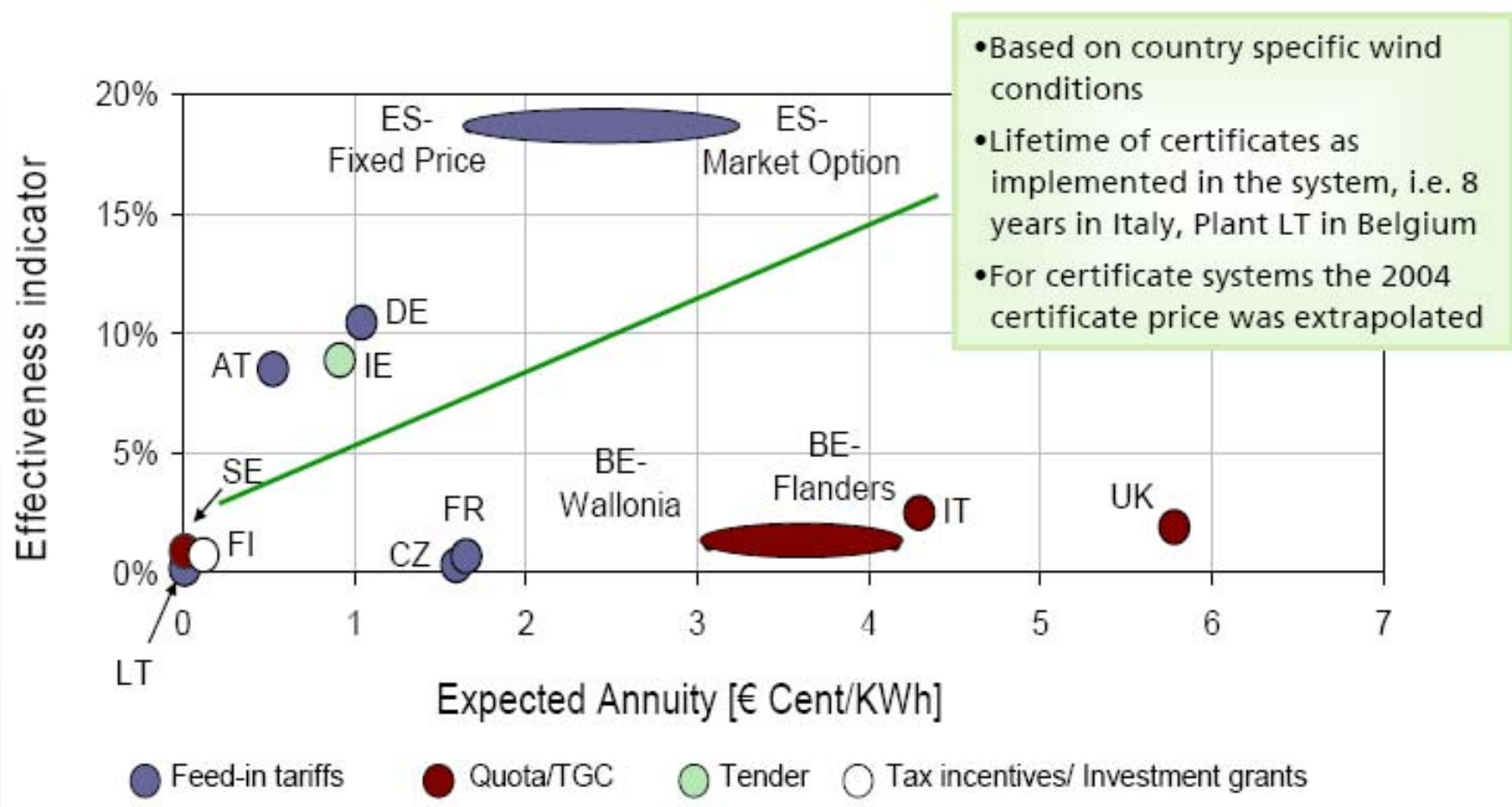
Main difference Enviro – IEA: Maintenance costs

■ Enviro
■ Median IEA



* In IEA (2005) only 3 of 17 projections assumed costs above 10 £/MWh with median costs of 5.82 £/MWh.

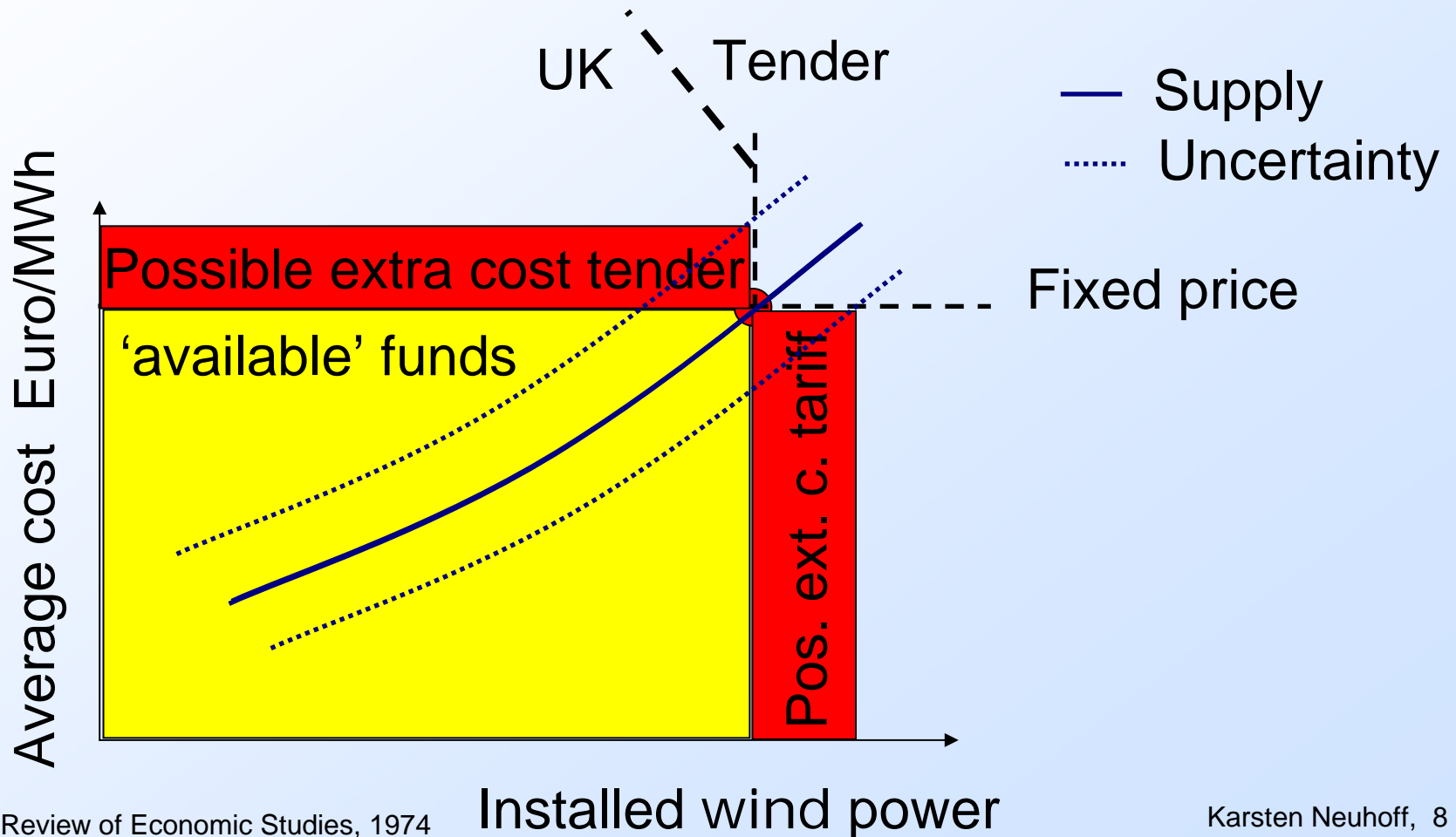
But does not explain alone the varying performance of renewable support schemes across Europe



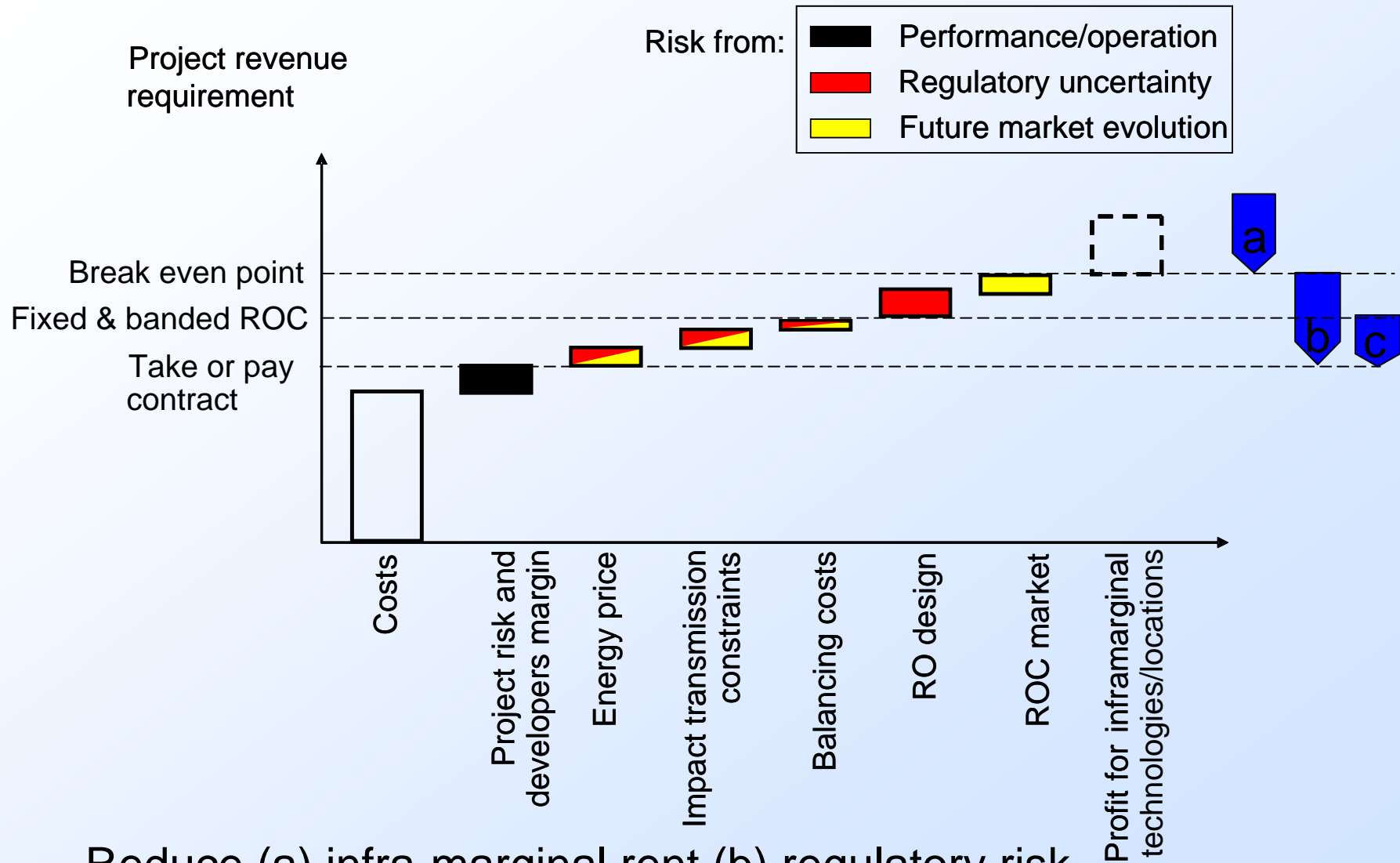
Source: Best practices for the promotion of RES-E in EU-Member States -An evaluation of policy effectiveness and efficiency - Anne Held, Mario Ragwitz, Dissemination Workshop of OPTRES / Green-Net Vilnius, November 13th 2006

Effectively there are two basic support schemes: Price-based or quantity-based

In the simplified theoretical world, they are identical



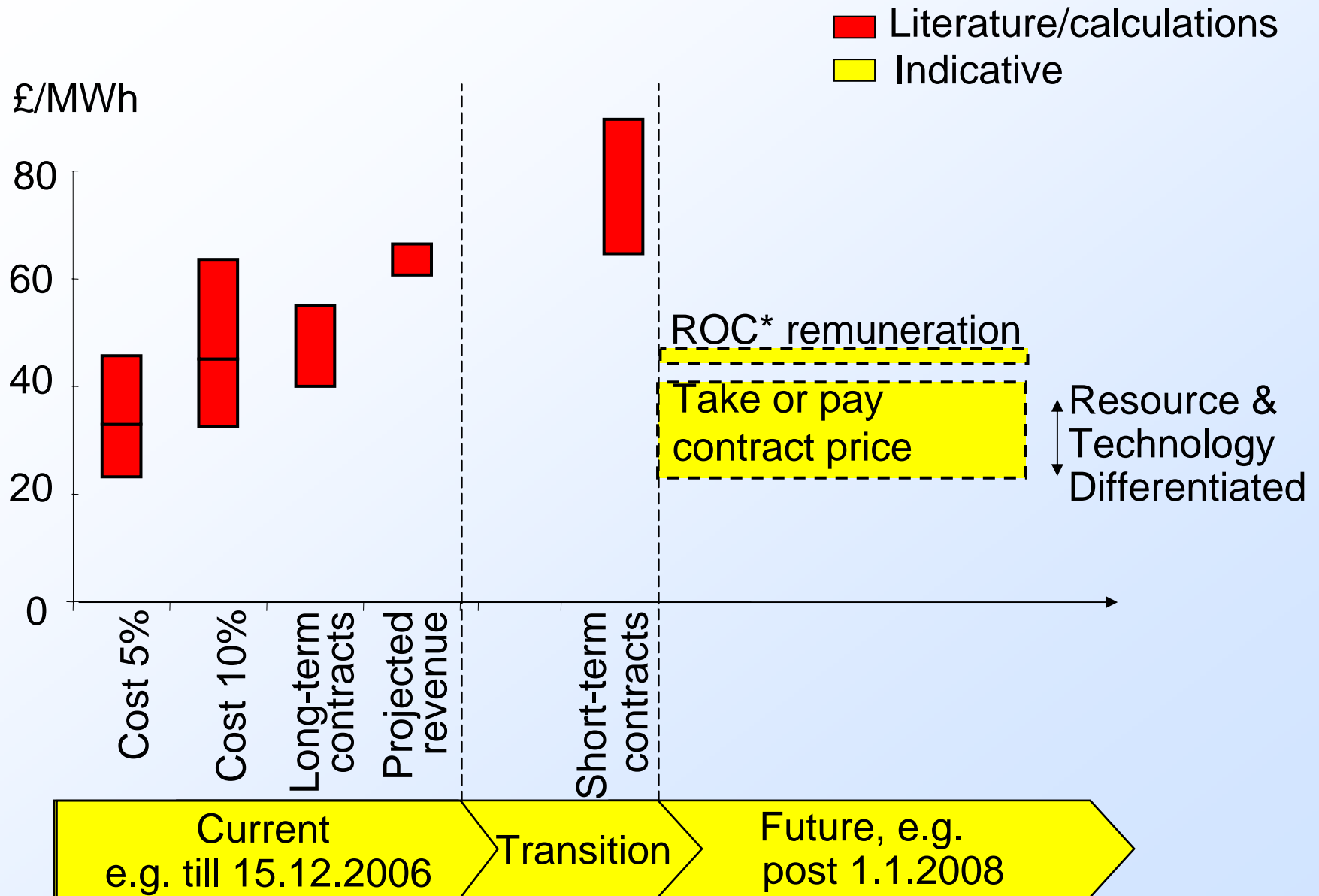
In the real world, it is all about who carries the risk



Reduce (a) infra-marginal rent (b) regulatory risk

(c) re-allocate risk from future technology mix/fuel prices Karsten Neuhoff, 9

Transitional vision



* Includes expected energy revenue. Higher price compensates risk & balancing costs

Details of implementation

Take-or-pay contract

- Conditional on technical availability
- Most suitable for technology with low MC
- Incentives for availability
 - Resource risk not manageable, no incentive required
 - Technical availability - forgone revenue suffices
 - Large correlated technical output? (off-shore wind)
- Contract price / structure – set by regulator, annual review
 - Requires clear and transparent methodology
- Counterparty could be NGT, DNOs,
 - Existing institution
 - Manages dispatch, best suited to forecast output etc.

Legal considerations (1)

- N.B. There are relevant legal questions both for transitional regime and the proposed new scheme going forward.
- Fundamental rights law restrictions – right to property
- EC law on the free movement of goods
- EC State aid law
- Antitrust law:
 - restrictions on State regulatory choices?
 - scrutiny of conduct of undertakings

Legal considerations (2)

- Fundamental rights law restrictions – right to property
 - Article 1 of the First Protocol to the ECHR;
 - *prima facie*, a change in the regulatory regime could activate this interest (either re existing ROCs or re the control of the use of the already operating renewable generators, which were planned on the basis of the current RO scheme);
 - any restriction on this right must be justified in the public interest and must be proportionate to the aim to be achieved by the restrictive measure.

Legal considerations (3)

- EC law on the free movement of goods
 - the proposed scheme is such as to favour domestically produced renewable electricity;
 - this is potentially an indirect restriction upon the importation of electricity from other Member States and thus *prima facie* a breach of Article 28 EC;
 - again, such a breach must be justified on a relevant public interest ground (environmental protection) and must not be so restrictive as to be disproportionate to that goal to be achieved.

Legal considerations (4)

- Combined application of fundamental rights and free movement law to the proposed *transitional* regime:
 - relevant because Member States must respect fundamental rights law when seeking to derogate from the Treaty provisions on free movement;
 - this basic structure requires, therefore, that:
 - (i) the price set for the redemption of the ROCs is sufficiently high so as not to be a disproportionate control of the property rights in ROCs already held or expected to be generated by normal plant operation; *but also*
 - (ii) the level of support provided beyond the competitive price by the price received by ROC-holders must not be so high as to amount to a disproportionate restriction upon the free movement of goods (here, imported electricity).

Legal considerations (5)

- EC State aid law

- this is relevant both to the transitional regime *and* the proposed new scheme;

→ transition: level of compensation for those still generating ROCs may raise State subsidy questions;

→ new scheme: extent of price support mandated by State regulation raises issue of State subsidy.

Legal considerations (6)

- EC State aid law (continued)
 - Are 'State resources' actually involved in either situation?
 - Even if it is strongly arguable that there is no State aid being granted, it may still be wise to notify and apply for exemption on environmental grounds: create improved investor security and confidence about the robust nature of the transitional regime and the new scheme going forward.

Legal considerations (7)

- Antitrust law:

- (a) Restrictions upon Member State regulatory choices?

- application of the norm of Articles 3(g), 10 and 81 EC, *but* only in specific circumstances;

- otherwise, Member State can choose a regime that has some restrictive effects upon competition, *but* the undertakings must continue to compete so far as possible thereunder.

Legal considerations (8)

- Antitrust law (continued):

(b) Scrutiny of the conduct of undertakings

- potentially a problem due to long-term nature of the proposed take-or-pay contracts: could be seen as creating restrictions upon competition;
- possible argument that such contracts are *de facto* required by State regulation and thus no competition law issue;
- but if competition law *does* apply, then exemption will be required from Article 81(1) EC.

Legal considerations (9)

- Antitrust law (continued):

(b) Scrutiny of the conduct of undertakings (continued)

- the Block Exemption Regulation on vertical agreements does not save this arrangement;

- need to rely upon criteria in Article 81(3) EC (either before a national court or a competition authority if challenged): key difficulty will be showing sufficient pass-on of a 'fair share' of the benefits of these contracts to consumers:

- collective environmental benefits do seem to count;

- long-term contracts have been allowed, particularly where needed to secure investment returns.

Legal considerations (10)

- Conclusions on the relevant legal issues

So long as the justifiable level of remuneration is met for both pre-existing expectations as to ROC generation and for the price for renewable generation under the proposed take-or-pay contract scheme is met, it seems that problems with regard to fundamental rights protection, EC trade law, EC State aid law and competition law (whether at EC or national level) can be met satisfactorily.

Conclusions – take or pay contract

- Buy government flexibility on
 - Changing set of supported technologies
 - Avoids rents/risks for past projects
 - Reflects debate: Investment – long-term contracting
- Simple to explain scheme – low transaction costs
- Investment continuity during transition
 - Security through property rights protection
- Compatible with UK and European legislation