

## **Review of the CBA changes since the last published CBA version (4 December 2012):**

- Further options for monetisation: status for impact on ancillary services and value of lost load**

Paul Plumptre  
Member of ENTSO-E Draft Team  
Planning Standards (DT PS)

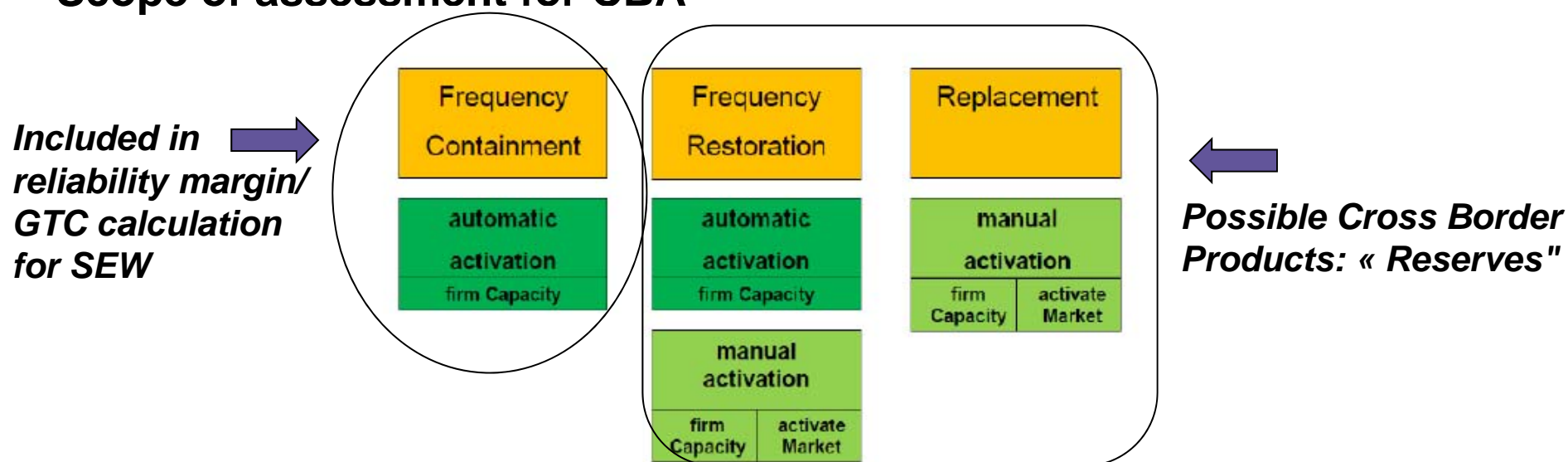
**Cost Benefit Analysis (CBA) methodology Workshop  
24 June 2013, ENTSO-E premises, Brussels,**

# Assessment of impact on ancillary services

## What are ancillary services?

“Services necessary to support transmission of electric power between generation and load, maintaining a satisfactory level of operational security and with a satisfactory quality of supply” (*ACER Framework Guidelines*)

## Scope of assessment for CBA



Initial Impact Assessment for the Framework Guidelines on Electricity Balancing, Agency for the Cooperation of Energy Regulators (ACER), 18 September 2012

# Assessment of impact on ancillary services

## Current situation

In the absence of a cross European Balancing Code, there are different treatments of Reserve pricing across European markets: **hence, no homogenous assessment is possible in Europe.**

## Two possibilities:

- Non-monetised Assessment of a Reserve benefit: KPI approach

*Technical studies show that there is a potential for cross border optimisation of Reserves* ➡ *CBA indicator B7 (TYNDP)*

- Monetised Assessment of a Reserve benefit

*Economic studies show that there is a potential for cross border optimisation of Reserves* ➡ *CBA Annex 6: Guidance for project specific PCI assessment*

# Assessment of impact on ancillary services



## **Monetised assessment:**

One has to consider whether either market (being interconnected) has a market-based approach to procurement of Reserve, such that a price of Reserve can be forecasted.

If so, a benefit of Reserve provided from one market into the other can be assessed; only at times when the Interconnector is not flowing fully in that direction (delivering an SEW benefit)

If not, zero Reserve assessment



# Assessment of impact on Security of Supply: VOLL

## ➤ Calculation of VOLL in Europe

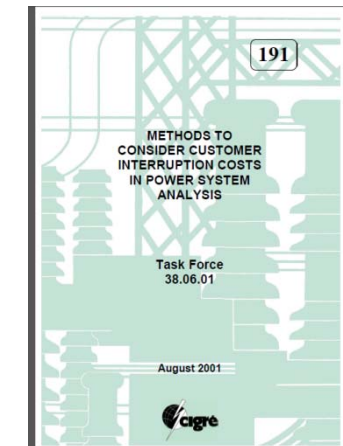
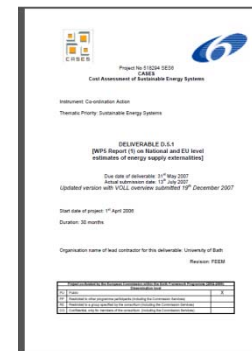
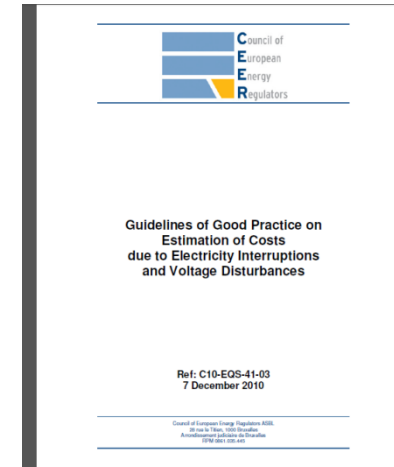
### ➤ CEER Guidelines (2010)

- ~Applied in France, Norway, Italy: comparable results
- Other countries : a great variety of methods

### ➤ Factors influencing VOLL:

- Structure of consumption (industry vs services...)
- Penetration rate of electricity in the economy
- Number/type of appliances
- GNP
- Temperature

➔ **Very wide ranges in Europe**  
(estimated between 4 and 40\$/kWh)



# Assessment of impact on Security of Supply: VOLL

**No European VOLL available**

**Need for surveys using the same methods all over Europe to get reliable and comparable values**

**R&D programme?**

**Or:**

- ✓ **Keep SoS in physical units (EENS in MWH - comparable and reliable)**
- ✓ **Use only relative values for calculation of consumer surplus if requested (before & after reinforcement)**

# Sample VoLL values



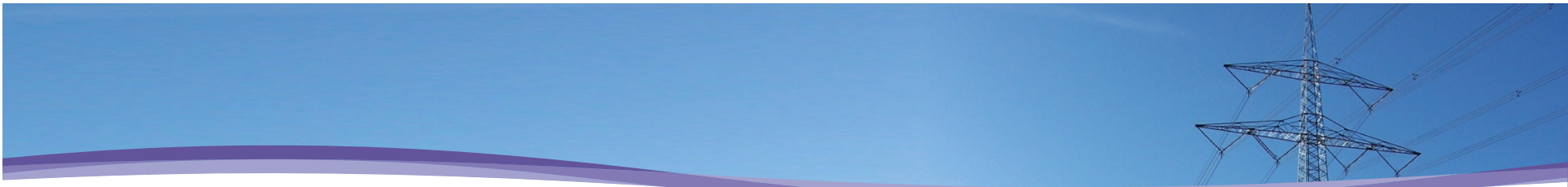
Country	VoLL (€/kWh)	Date	Used in planning ?	Method/reference	Reference
Austria (E control)	WTP: Industry 13,2, Households, 5,3 Direct worth: Households: 73,5 Industry : 203,93	2009	No	R&D for incentive regulation, Surveys using both WTP and Direct Worth	(4)
France (RTE)	26. Sectoral values for large industry, small industry, service sector, infrastructures, households and agriculture available	2011	Yes (mean value)	CEER: surveys for transmission planning using both WTP, Direct Worth and case studies.	(12)
Great Britain	19,75	2012	No	Incentive regulation, initial value proposed by Ofgem	(13)
Ireland	Mean : 40	2005	No	R&D, production function approach	(6)

# Sample VoLL values



Italy (AEEG)	10,8 (Households) 21,6 (Business)	2003	No	Surveys for incentive regulation, using both WTP and Direct Worth (SINTEF)	(3) & (5)					
Netherlands (Tennet)	Mean : 8,6	2003	No	R&D, production function approach	(7)					
Norway (NVE)	Industry: 10,4 Service sector: 15,4 Agriculture: 2,2 Public sector: 2 Large industry: 2,1	2008	Yes (sectorial values)	Surveys for incentive regulation, using both WTP and Direct Worth (SINTEF)	(9) and (10)					
Portugal (ERSE)	1,5	2011	Yes (mean value)	Portugese Tariff Code	(14)					
Spain	6,35	2008	No	R&D, production function approach	(8)					
Sweden	<table><tr><td>Households 0,2</td></tr><tr><td>Agriculture 0,9</td></tr><tr><td>Public sector 26,6</td></tr><tr><td>Service sector 19,8</td></tr><tr><td>Industry 7,1</td></tr></table>	Households 0,2	Agriculture 0,9	Public sector 26,6	Service sector 19,8	Industry 7,1	2006	No	R&D, WTP, conjoint analysis	(11)
Households 0,2										
Agriculture 0,9										
Public sector 26,6										
Service sector 19,8										
Industry 7,1										





**Any questions?**

**Thank you for your attention!**