

# Welcome

---

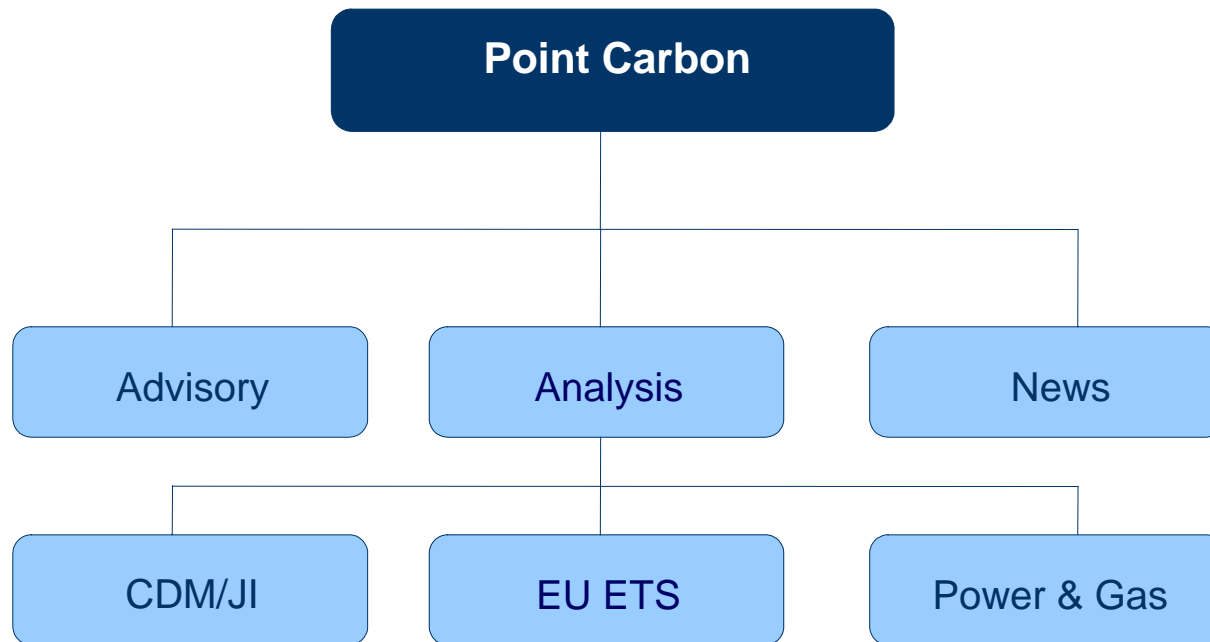
## CCS and the carbon market

Point Carbon  
Hæge Fjellheim  
5 October 2007

# About us

---

- Consultancy services, independent analysis and news
- Providing critical insights into energy and environmental markets
- 125 employees. Oslo, London, Washington DC, Kiev, Tokyo, Brussels
- More than 15,000 subscribers in 150 countries



# Key questions

---

## 1. Will I get credits for my CCS project?

- Are there any legal barriers?
- Is CCS recognized in carbon markets?
- When will I know for sure?

## 2. What will be the value of the credits?

- Carbon markets in 2008-12 and beyond

---

Will I get credits for my project?

# Recent removal of barriers

---

- London (global) and OSPAR (North East Atlantic)
- Amendments adopted 2006/7 to permit storage of CO2 in sub-seabed geological formations
- Specific guidelines for management of CCS operations, incl. risk assessment, site selection etc.

**CCS now permitted under ocean conventions**

# CCS and the EU ETS

---

- CCS currently not covered by EU ETS Directive
- Phase II (2008-12): CCS projects can be opted in to EU ETS
  - "bubble approach"
  - No general guidelines
  - UK opt-in under preparation
- Phase III (from 2012): Commission considering CCS solution
  - proposal in December

# CCS and CDM

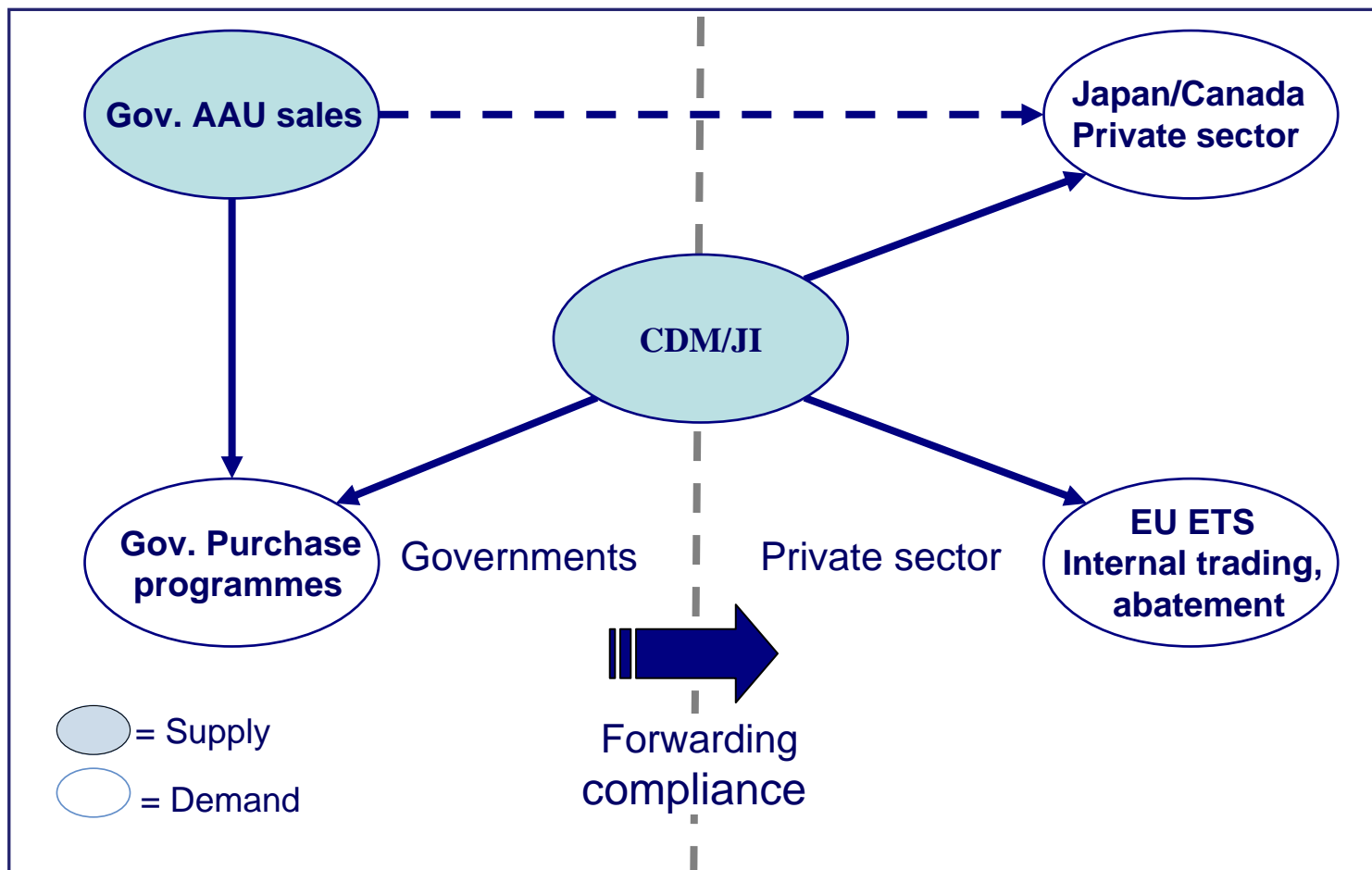
---

- ***“..prepare recommendations..”*** on CCS as CDM project activities at COP/MOP3 (Bali, Dec 2007)”
- ***.. “with a view to taking a decision”*** at COP/MOP 4 (2008)
- Main issues identified as: leakage, project boundary, permanence and long term responsibilities

---

What will be the value of my credits?

# The Kyoto market: how it works, in theory



Political framing decisions

# EU ETS; Estimated forecast Phase II

as of Oct 2007

• CO <sub>2</sub> production	11.544 Mt	
• Cap	9.413 Mt	
• <b>Emissions-to-Cap</b>	<b>2.131 Mt</b>	
• Reserves	1.034 Mt	
• <b>Demand</b>	<b>1.097 Mt</b>	←
• CERs/ERUs total available	2.051 Mt	
• Government purchase	778 Mt	
• Non-EU private demand	200 Mt	
• <b>CERs/ERUs available for EU-ETS</b>	<b>1.073 Mt</b>	←

**..demand and supply seems fairly balanced..**

# Two competing regimes for prices in EU ETS phase II

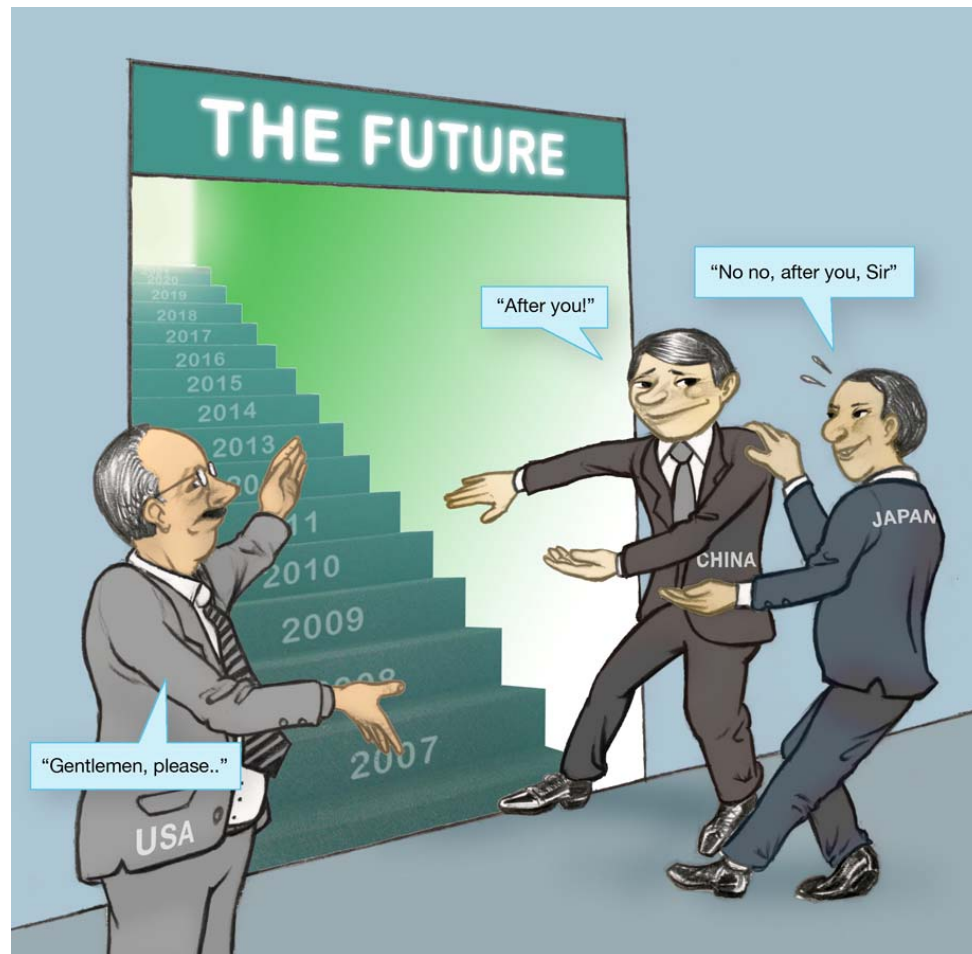
---

1. Domestic reductions needed to cover shortage
  - Fuel switching defines *price ceiling*
2. Supply of CERs/ERUs sufficient to cover entire shortage
  - CERs/ERUs define *price floor*

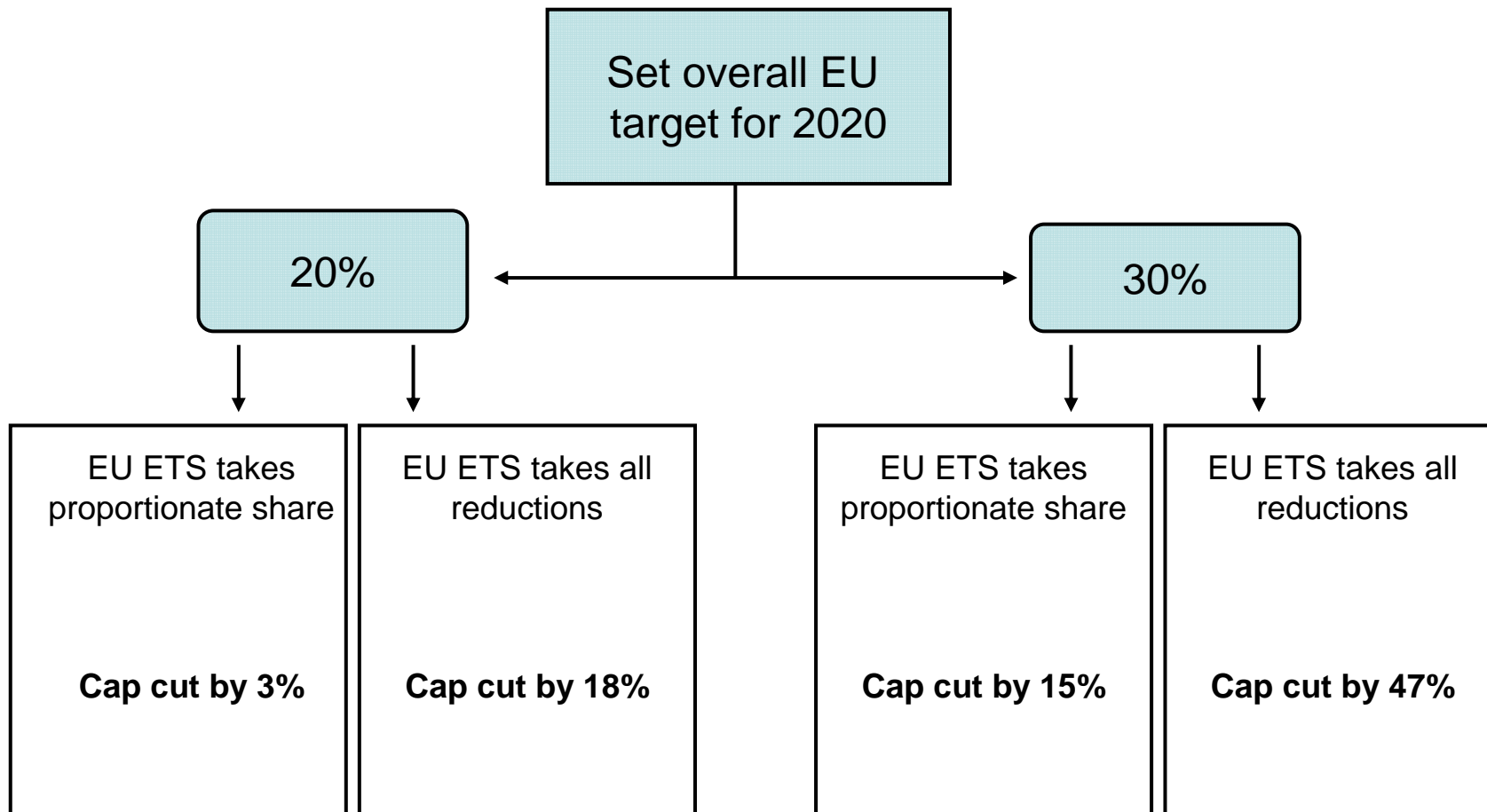
**Price target =  $X$ \*Switching price +  $(1-X)$ \*CER/ERU price (floor)**

- $X$  = Probability (%) that domestic reductions are needed
- Current estimate: Average carbon price of 25 €/t

# Carbon market post 2012?



# EU ETS Phase III: Cut the cap



Renewable target could help out!!

# Conclusion

---

- Enabling frameworks for CCS in carbon markets are under development....
- .....it is more a question of *how* and *when* than *if*
- ....*timing* and *carbon prices* crucial.

---

Thank you!

[hf@pointcarbon.com](mailto:hf@pointcarbon.com)

[www.pointcarbon.com](http://www.pointcarbon.com)

**PointCarbon**

Providing critical insights into energy and environmental markets



[www.pointcarbon.com](http://www.pointcarbon.com)