



POTSDAM INSTITUTE FOR
CLIMATE IMPACT RESEARCH

Elements of carry-over proposals

Impact under different scenarios

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Identify influential elements

- Indicators
 - Average emissions 2013 to 2020
 - Surplus left after CP2
- Consider three example scenarios
- Based on a model used for two recent studies
 - *Hot topic: AAU surplus. Political implications of the long-term effect of surplus from the first and second Kyoto period*, Vieweg et al. 2012
 - http://www.climateanalytics.org/sites/default/files/attachments/publications/Hot%20topic_AAU%20surplus_2012.pdf
 - Influence of rules governing surplus emission allowances on developed countries emissions, Chen et al., 2012
 - www.primap.org -> publications

Elements of the proposals

- **Restricting use of CP1 carry-over**
 - **Domestic use only in G77+China**
 - **Restriction on usable amount in Swiss proposal**
- **Cancellation of CP1 carry-over**
 - **At the end of CP2 in both proposals**
- **CP2 surplus**
 - **G77+China**
 - **Case 1: cancel CP2 units above 2012 levels at beginning of CP2**
 - **Case 2: cancel surplus emerging from them at end of CP2**
 - **Swiss: Cancel at end of CP2**
- **CERs**
 - **Carry-over of up to 2.5% of initial Assigned Amount and full use**

Scenario 1: current QELROs, BAU projections

- **Business as usual (BAU) is 16% below 1990 levels in 2013-2020**
- **QELROs are 18% below 1990 levels**
- **With all proposals emissions can stay at BAU**
- **No carry-over: 17% below 1990**
 - **500Mt of LULUCF credits projected**
- **Surplus left in 2020 (excluding CERs)**
 - **Current KP rules: 7.2Gt**
 - **G77+China: case 1: 1.7Gt, case 2: 1.8Gt**
 - **Swiss: 0Gt**
- **Influential elements for post 2020**
 - **CP1+CP2 surplus cancellation at end of CP2**

Scenario 2: Increasing ambition and BAU

- **Business as usual higher and is 12% below 1990 levels**
- **QELROs are 20% below 1990 levels**
- **Swiss: emissions 15% below 1990**
- **G77+China: emissions can stay at BAU**
- **Influential elements for CP2**
 - **Amount restriction for CP1 surplus use**

Scenario 3: increased ambition + Ukraine joins

- Business as usual is 17% below 1990 levels in 2013-2020
- QELROs are 16% below 1990 levels
- G77+China case 1: 18% below 1990 -> **increase in Ambition**
- Other proposals: emissions can stay at BAU
- Surplus left in 2020 (excluding CERs)
 - Current KP rules: 9.5Gt
 - All proposals: 0Gt
- Influential elements for CP2
 - CP2 surplus cancellation at begin of CP2
- Influential elements for post 2020
 - CP1+CP2 Surplus cancellation at end of CP2

Conclusions

- **Effect of proposals depends on scenario**
 - **With current BAU estimates cancellation at CP2 end has the largest effect: governs if surplus is available after 2020**
 - **If party with QELRO above BAU joins KP, cancellation at begin of CP2 affects CP2 emissions**
 - **If ambition is increased, a cap on the amount of usable surplus becomes an important element for CP2 emissions**
- **Both the G77+China and the Swiss proposal reduce surplus significantly compared to current KP rules. CP2 emissions depend on scenario**

A carry-over proposal that is robust under scenario changes needs to incorporate all elements.