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## THE RECORDING OF EMISSION PERMITS ISSUED UNDER CAP AND TRADE SCHEMES IN THE NATIONAL ACCOUNTS

### Update to SNA News and Notes, Number 30/31 (February 2011)

The ISWGNA issued a clarification on the treatment of payments for emission permits issued under cap and trade schemes in the national accounts. However, the forty-second session of the United Nations Statistical Commission (UNSC), in February 2011, concluded that the recommendations on the treatment of emission permits in the national accounts, provided by the ISWGNA in News and Notes, Number 30/31, represents an issue of interpretation and not of clarification. In accordance with the update procedures endorsed by the UNSC regarding updating the System of National Accounts, the ISWGNA was requested to consult the Advisory Expert Group on national accounts (AEG)<sup>1</sup>. Specifically the AEG were asked to comment on the ISWGNA recommendations. This note provides a summary of the outcome of that consultation.

#### Background

Although much of the background information presented in this section is available in SNA News and Notes, Number 30/31, a summary of this information is provided for ease of exposition.

<sup>1</sup> The SNA update procedures are available at: <http://unstats.un.org/unsd/nationalaccount/uProc.asp>

The issue of emission permits was first discussed by the AEG in November 2008. At this meeting the AEG agreed that *payments for emission permits issued under cap and trade schemes should be recorded as taxes recorded at the time that the emission took place*. However there were a number of other issues on which the AEG could not agree, in particular the nature of the underlying asset of the permits, and they recommended the formation of a Task Force to investigate the issue.

The Task Force was formed by the ISWGNA in 2009. It met twice in June and November of that year and provided a final report to the ISWGNA in October 2010

(<http://unstats.un.org/unsd/nationalaccount/crilit.asp>; and

<http://www.oecd.org/dataoecd/11/49/46424606.pdf>).

The Task Force considered a number of options, including one that diverged from the AEG recommendation that taxes should be recorded at the time the emissions took place. However, this option was subsequently not recommended. Two options were preferred that were consistent with the position taken by the AEG in 2008. However, the Task Force was split on the nature of the underlying asset. One-third of the Task Force preferred to treat

the permit as a financial asset, whereby any difference between the original issue value and the market value is treated as a change in the value of the financial asset and liabilities of government towards the permit holders. The remainder of the Task Force preferred to treat payments for emission permits as a prepayment of tax (financial asset) equal to the payment made when the permit was first issued, with any difference between the issue value and the market value then being treated as a marketable contract (non-produced non-financial asset).

After two meetings, the Task Force was not able to arrive at a consensus position. It fell to the ISWGNA to consider both alternatives and make a recommendation.

The ISWGNA's position was described in News and Notes, Number 30/31. The ISWGNA endorsed the majority view of the Task Force regarding the nature of the asset for emission permits. Its position recognized that all of the options presented challenges, but the ISWGNA's preference reflected: (a) the fact that most emissions permits are currently issued for free by government; and (b) a desire to consistently treat permits acquired under cap and trade schemes and equivalent permits that can be acquired under other means, such as the Clean Development Mechanism.

As described above the issue was subsequently passed to the AEG.

### **AEG Consultation**

The discussions amongst AEG Members broadly mirrored those that were had by the Task Force: a significant majority of AEG members agreed with the recommendation by the ISWGNA.

However, a number of AEG members emphasised the importance of simplifying the recording of transactions related to emission permits, particularly the presentational issues related to the impact on the current-account balance in the context of taxes on production to the rest of the world (R.O.W).

One member favoured the treatment of permits as a non-produced non-financial asset with the transactions being recorded like for the

treatment of "permits to undertake a specific activity" (2008 SNA par 17.349 to 17.359). The member also took the view that the payment for permits satisfied the SNA definition of a capital tax rather than taxes on production. This treatment can be summarized as follows:

*A non-produced non-financial asset is created in the balance sheets of the initial unit acquiring the permit, recorded as other changes in volume of assets (OCV), and the transactions closely follow those recorded in the case of taxi licenses. Any payment from the unit to government reflects a tax payment at the time the payment is made. In between the issue and surrender date, the permit can be bought and sold by units with the flows recorded at their transaction prices with changes in the value of the non-produced non-financial asset being recorded as holding gains or losses (revaluation account). At the surrender date, the unit that owns the permit surrenders it to government with the value of the non produced asset fully removed through a recording of OCV.*

One member favoured the treatment of permits as financial assets sold by governments (which therefore incur matching liabilities). In the first round of consultations, two members initially supported this position. This treatment can be summarized as follows:

*The initial payment for the permit is recorded as a financial asset with a corresponding financial liability of government. The price paid for the permits at auction is considered as a payment for acquisition of a financial asset. This has no impact on government net lending or tax revenues at that point, if the permits are sold at market prices, but there will be an impact on government total financial liabilities (although this would be indirectly offset if government uses the receipts to redeem other government debt instruments). In between the issue and surrender date, the value of the permit (financial asset) can vary. Government liabilities will fall and rise in line with the market value of the permit. Taxes, reflecting the market value of permits at the time of emission, are recorded at the same time as emissions. Imputations are needed for permits sold below market price, which will affect net-lending. Capital transfers from government to acquiring units, equivalent to the market value*

*of permits, are imputed when government provides permits for free or below market price.*

Not including ISWGNA representatives, eleven members of the AEG favoured the recording of the payments for emission permits, issued by governments under cap-and-trade schemes, as other taxes on production on an accrual basis, which are payable at the time of emission by the emitters. This treatment can be summarized as follows:

*At issue of a permit, a financial asset is created valued at the price of purchase from government. At any subsequent point in time, the difference between the market price and the original purchase price is treated as a non-produced non-financial asset. The financial asset is considered a tax pre-payment. The non-produced non-financial asset is created through an OCV. A liability corresponding to the financial asset is recorded in the government account, and retains the same value (initial purchase price) throughout the life of the permit. This would have no impact on government net-lending at the time of permit issue. Between the issue and surrender date the permit can be bought and sold, with changes in the value reflected in changes in the value of the non-produced non-financial asset and corresponding changes in the revaluation account – which could have a negative value. At the time of emission and surrender of the permit, the financial asset part of the permit is settled through the payment of the tax, while the non-financial non-produced asset is removed by OCV in the accounts of the unit surrendering the permit. Tax revenues (and therefore net-lending) of government would only increase with the surrender of permits equal to the original price paid for the permit.*

### UNSC Consultation

In accordance with the update procedures of the SNA, the outcome of the consultation with the AEG on the treatment of emission permits under cap and trade schemes in the national accounts was submitted, through a written procedure, for concurrence to the UNSC. Despite concerns raised by two members with the result of the consultation, all members of

the UNSC concurred with the outcome of the consultation. This edition of the SNA News and Notes completes the formal recording of the consultation process with the decision described in the conclusion below.

### Conclusion

In supporting the earlier ISWGNA position on emission permits, a number of AEG members advocated simple approaches to recording transactions related to emission permits. And whilst they felt the modelled approach proposed by the ISWGNA in the SNA News and Notes 30/31 addressed a number of accounting and presentational issues, a simpler approach was proposed to mitigate the impact on the current-account balance in the context of taxes on production to the R.O.W.

In response to the request to address the effect on the current account balance and heeding the message for simplicity, the ISWGNA has modified its earlier guidance in consultation with the AEG in the following way:

*The payments for emission permits, issued by governments under cap and trade schemes, should be recorded at the time the emissions occur as taxes, specifically other taxes on production (D29), on an accrual basis. The timing difference between the payments received by government for the permits and the time the emission occurs gives rise to a financial liability (accounts payable) for government and a financial asset (accounts receivable) for the holder. The difference between the pre-paid tax value of the permit and the market value of the permit represents a marketable contract (non-produced non-financial asset) for the holder. The creation and disappearance of the non-produced non-financial asset are recorded as an other change in volume of assets.*

*The approach to accruing payments for emission permits should be based on the underlying assumption that permits issued by a particular country are more likely than not to be surrendered in that country.*

*In the simple case of a pure national scheme, the taxes should be accrued in the following way. The tax recorded for any single permit surrendered in relation to emissions that*

occurred in period  $t$  is equivalent to the total stock of relevant other accounts payable divided by the total number of active permits issued (and remaining in circulation) at time  $t$ . The relevant other accounts payable should in theory exclude any permits that were surrendered after time  $t$  in respect of emissions that occurred before time  $t$ . Equally, the total number of active permits (and remaining in circulation) at time  $t$ , should also exclude these permits. In practice, however, it can be assumed, for simplicity, that the time the permit is surrendered is the same as the time that emissions occur, as long as there is no significant lag between the two events and the lag is constant.

For multinational schemes, the situation is more complex as in any single country more or less permits may be surrendered than the number that was originally allocated.

- Over the lifetime of an emissions scheme, in countries where more permits are surrendered than issued, taxes should be recorded as in the pure national case until the total stock of that country's permits have been assumed to have been exhausted. Thereafter, in theory, taxes on production to the R.O.W should be recorded for any surrendered permit, where the average price of any permit is equal to the total stock of relevant other accounts payable in other countries divided by the total number of active permits issued (and remaining in circulation). In practice however the stock of permits issued to a country is likely to be broadly sufficient for its needs and so, unless there is a significant shortfall in the number of permits issued to that country, it may be simpler to ignore this.
- In countries that issue more permits than are surrendered, the same principles should apply. However this will mean that at the end of the lifetime of any phase of a scheme, there will implicitly be unsurrendered permits for that country. In practice, these permits are likely to have been surrendered in other countries whereby, in theory, a tax on

production from the R.O.W should be recorded for these permits. However, modelling these flows in a sensible manner over time and in a way that is consistent with counterpart taxes paid by non-residents is non-trivial. In practice it is easier to ignore these flows and instead write off the permits (at the end of the permit's lifetime) in the issuing country's accounts as an other change in volume of assets, (K22), as if they were unused.

- For those countries where fewer permits are surrendered in the country than issued, payments received exceeds taxes recorded. Setting aside the issue of recording flows of taxes on production from the R.O.W, the scope for payments received to exceed taxes recorded remains as not all permits will necessarily be surrendered, especially those purchased by environmental groups. Moreover for countries that issue significantly more permits than are expected to be surrendered in that country, a strong case can be made for considering the difference between payments received and taxes recorded as a windfall of sorts, akin to an other change in volume of assets, even if theoretically they should be recorded as a tax on production from the R.O.W.

In conclusion the ISWGNA recognises that the approach for dealing with emission permits is not perfect but it has come to the view that it is the best of all the possible options at the present time; especially given the current background, where most permits are issued for free and where there is an explicit equivalence between permits issued under cap and trade schemes and those that can be acquired via other means, such as the Clean Development Mechanism. Cognisant of the fact that the recommendation retains some challenges, the ISWGNA recognises that the issue may need to be reviewed again in future, taking into account developments in the nature of cap and trade schemes that may occur in the longer term.

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## MEETINGS AND SEMINARS

23 - 25 April 2012, Meeting of the Advisory Expert Group on National Accounts, New York

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### Editorial Note

SNA News and Notes is a bi-annual information service of the ISWGNA prepared by United Nations Statistics Division (UNSD). It does not necessarily express the official position of any of the members of the ISWGNA (European Union, IMF, OECD, United Nations and World Bank).

SNA News and Notes is published in four languages (English, French, Russian and Spanish) and can be accessed on the internet: <http://unstats.un.org/unsd/nationalaccount/snnews.asp>

Following the completion of the 2008 SNA it was necessary to update the website of the ISWGNA. The updated website now include, in addition to information about the ISWGNA activities, a platform for monitoring the implementation of the SNA with links to the work programmes of the ISWGNA members and regional commissions; information about the research agenda of the SNA; and the activities of the AEG. The website is available at: <http://unstats.un.org/unsd/nationalaccount/iswgna.asp>. A searchable PDF copy of the 2008 SNA and earlier versions of the SNA are available at <http://unstats.un.org/unsd/nationalaccount/sna.asp>.

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