

ASAF Member PAPER

16 – 17 July 2015

Project	Pollutant Pricing Mechanisms (formerly Emissions Trading Schemes)
Paper topic	China's New Proposal on Accounting for Emission Trading Schemes

This paper has been prepared for discussion at a public meeting of the Accounting Standards Advisory Forum (ASAF) and does not represent the views of the China Accounting Standards Committee (CASC) or any individual member of the CASC.

Agenda Paper 7B outlines some possible approaches to accounting for a cap-and-trade type of emissions trading scheme. Agenda Paper 7 asks the ASAF not merely to comment on the listed approaches but also to express non-binding, free-thinking ideas about other possible approaches. This paper is presented to aid discussion about a further possible model.

Basic accounting principles proposed for Emission Trading Schemes:

1. When the entity receives the allowance, it should recognize an asset (*Allowances*) and a liability (*Liability for expected emissions*).
2. At the reporting date (in the following case, that is 30 Jun 2015, 31 Dec 2015, 31 Mar 2016), the asset and liability should be remeasured at the *fair value*, the changes in the fair value are recognized in the P/L.
3. At the reporting date (in the following case, that is 30 Jun 2015, 31 Dec 2015), a liability (*Liability to deliver allowances, that is the liability for actual emission*) should be recognized as emissions are made. In the meantime, the liability for expected emissions will decrease since it is transformed into the liability to deliver allowance which is based on actual emissions.
4. If the actual emissions exceed the expected emissions (the allowances allocated) at the end of year, the excess amounts (the excess allowances × the current price) should be recognized as *Emission expense*. If the actual emissions are less than the expected emissions, the remaining amounts (the remaining allowances × the current price) should be recognized as *Emission income*.

Scenario 1 (The following transaction information is based on Agenda Paper 7B)

- (a) On 1 January 2015, Entity 1 received 5,000 allowances, which are equivalent to 5,000 tCO₂e emissions. This is equal to the amount of emissions that Entity 1 expects to emit during 2015.
- (b) The management of Entity 1 does not intend to buy or sell any allowances during 2015. They intend to hold the 5,000 allowances and use them to settle the expected obligation to submit 5,000 allowances to the government on 1 April 2016.
- (c) During 2015, Entity 1 emitted 5,000 tCO₂e. It did not buy or sell any allowances during 2015 and submitted the 5,000 allowances received in January 2015 to the government on 1 April 2016.
- (d) The market price of allowance was **CU10** on 1 Jan 2015, **CU12** on 30 Jun 2015, **CU9** on 31 Dec 2015 and **CU14** on 31 Mar 2016.

Statement of profit or loss and other comprehensive income	6 months to 30 Jun 2015	6 months to 31 Dec 2015	Full year 2015	3 months to 31 Mar 2016	Total for 15 months	On 1 Apr 2016
	CU	CU	CU	CU	CU	CU
Remeasurement	0	0	0	0	0	0
Profit/(loss)	0	0	0	0	0	0
Statement of financial position	Date of allocation 1 Jan 2015	Interim date 30 Jun 2015	Year-end 31 Dec 2015	3-month interim date 31 Mar 2016	Settlement on 1 Apr 2016	
	CU	CU	CU	CU	CU	
Assets						
Allowances	50,000	60,000	45,000	70,000	0	
Liabilities						
Liability for expected emissions	(50,000)	(36,000)	0	0	0	
Liability to deliver allowances		(24,000)	(45,000)	(70,000)	0	
Total liabilities	(50,000)	(60,000)	(45,000)	(70,000)	0	

Accounting entries**On the first day of the year—1 January 2015**

Entity 1 makes the following accounting entry to record receiving the allowances allocated free of charge:

Dr	Allowances (separate asset)	CU50,000	
	Cr	Liability for expected emissions	CU50,000

To recognize the allowances at their fair value (5,000 tonnes at CU10 per tonne).

At the end of the first six months—30 June 2015

Entity 1 makes the following accounting entries in respect of the first six months of the year:

Dr	Allowances	CU10,000	
	Cr	Income (remeasurement)	CU10,000

To recognize the increase in the fair value of the allowances held (5,000 tonnes whose price has increased from CU10 to CU12 per tonne)

Dr	Expense (remeasurement)	CU10,000	
	Cr	Liability for expected emissions	CU10,000

To recognize the increase in the fair value of the Liability for expected emissions (5,000 tonnes whose price has increased from CU10 to CU12 per tonne)

Dr	Liability for expected emissions	CU24,000	
	Cr	Liability to deliver allowances (Liability for actual emissions)	CU24,000

To recognize the increase in the Liability to deliver allowances to date (2,000 tonnes measured at CU12 per tonne)

At the end of the year—31 December 2015

Entity 1 makes the following accounting entries in respect of the last six months of the year:

Dr	Expense (remeasurement)	CU15,000	
	Cr	Allowances	CU15,000

To recognize the decrease in the fair value of the allowances held (5,000 tonnes whose price has decreased from CU12 to CU9 per tonne)

Dr	Liability for expected emissions	CU9,000
Dr	Liability to deliver allowances	CU6,000
	Cr Income (remeasurement)	CU15,000

To recognize the decrease in the fair value of the Liability for expected emissions and the Liability to deliver allowances (total 5,000 tonnes whose price has decreased from CU12 to CU9 per tonne)

Dr	Liability for expected emissions	CU27,000
	Cr Liability to deliver allowances	CU27,000

To recognize the increase in the Liability to deliver allowances to date (3,000 tonnes measured at CU9 per tonne)

**At the end of the next 3 months, immediately prior to settling the obligation—
31 March 2016**

Entity 1 continues to account for the allowances and its liabilities at fair value. Entity 1 makes the following accounting entries in respect of the first three months of the following year:

Dr	Allowances	CU25,000
	Cr Income (remeasurement)	CU25,000

To recognize the increase in the fair value of the allowances held (5,000 tonnes whose price has increased from CU9 to CU14 per tonne)

Dr	Expense (remeasurement)	CU25,000
	Cr Liability to deliver allowances	CU25,000

To recognize the increase in the fair value of the Liability to deliver allowances (5,000 tonnes whose price has increased from CU9 to CU14 per tonne)

Accounting entries on settling the obligation—1 April 2016

Entity 1 makes the following accounting entries, when it settles the Liability to deliver allowances made in the previous reporting year:

Dr	Liability to deliver allowances	CU70,000
	Cr Allowances	CU70,000

To recognize the settlement of the obligation by delivering 5,000 allowances.

Scenario 2: Entity 1 has actually emitted 3, 500 tonnes during the last six months of 2015 and will buy 500 allowances in the market at the price of CU14 on 31 Mar 2016.

Statement of profit or loss and other comprehensive income	6 months to 30 Jun 2015	6 months to 31 Dec 2015	Full year 2015	3 months to 31 Mar 2016	Total for 15 months	On 1 Apr 2016
	CU	CU	CU	CU	CU	CU
Emission expense	0	(4,500)	(4,500)		(4,500)	
Remeasurement	0	0	0	(2,500)	(2,500)	0
Profit/(loss)	0	(4,500)	(4,500)	(2,500)	(7,000)	0
Statement of financial position	Date of allocation 1 Jan 2015	Interim date 30 Jun 2015	Year-end 31 Dec 2015	3-month interim date 31 Mar 2016	Settlement on 1 Apr 2016	
	CU	CU	CU	CU	CU	
Assets						
Allowances	50,000	60,000	45,000	77,000	0	
Liabilities						
Liability for expected emissions	(50,000)	(36,000)	0	0	0	
Liability to deliver allowances		(24,000)	(49,500)	(77,000)	0	
Total liabilities	(50,000)	(60,000)	(49,500)	(77,000)	0	
Equity						
Retained earnings	0	0	(4,500)	(7,000)	0	

Accounting entries**On the first day of the year—1 January 2015**

Entity 1 makes the following accounting entry to record receiving the allowances allocated free of charge:

Dr	Allowances (separate asset)	CU50,000
	Cr Liability for expected emissions	CU50,000

To recognize the allowances at their fair value (5,000 tonnes at CU10 per tonne).

At the end of the first six months—30 June 2015

Entity 1 makes the following accounting entries in respect of the first six months of the year:

Dr	Allowances	CU10,000
	Cr Income (remeasurement)	CU10,000

To recognize the increase in the fair value of the allowances held (5,000 tonnes whose price has increased from CU10 to CU12 per tonne)

Dr	Expense (remeasurement)	CU10,000
	Cr Liability for expected emissions	CU10,000

To recognize the increase in the fair value of the Liability for expected emissions (5,000 tonnes whose price has increased from CU10 to CU12 per tonne)

Dr	Liability for expected emissions	CU24,000
	Cr Liability to deliver allowances	CU24,000

To recognize the increase in the Liability to deliver allowances to date (2,000 tonnes measured at CU12 per tonne)

At the end of the year—31 December 2015

Entity 1 makes the following accounting entries in respect of the last six months of the year:

Dr	Expense (remeasurement)	CU15,000
	Cr Allowances	CU15,000

To recognize the decrease in the fair value of the allowances held (5,000 tonnes whose price has decreased from CU12 to CU9 per tonne)

Dr	Liability for expected emissions	CU9,000
Dr	Liability to deliver allowances	CU6,000
Cr	Income (remeasurement)	CU15,000

To recognize the decrease in the fair value of the Liability for expected emissions and the Liability to deliver allowances (total 5,000 tonnes whose price has decreased from CU12 to CU9 per tonne)

Dr	Liability for expected emissions	CU27,000
Dr	Emission expense	CU4,500
Cr	Liability to deliver allowances	CU31,500

To recognize the increase in the Liability to deliver allowances to date (5,500 tonnes measured at CU9 per tonne)

**At the end of the next 3 months, immediately prior to settling the obligation—
31 March 2016**

Entity 1 continues to account for the allowances and its liabilities at fair value. Entity 1 makes the following accounting entries in respect of the first three months of the following year:

Dr	Allowances	CU7,000
Cr	Cash	CU7,000

To recognize the increase in the allowances bought at the price of CU14 (500 tonnes whose price is CU14 per tonne)

Dr	Allowances	CU25,000
Cr	Income (remeasurement)	CU25,000

To recognize the increase in the fair value of the allowances held (5,000 tonnes whose price has increased from CU9 to CU14 per tonne)

Dr	Expense (remeasurement)	CU27,500
Cr	Liability to deliver allowances	CU27,500

To recognize the increase in the fair value of the Liability to deliver allowances (5,500 tonnes whose price has increased from CU9 to CU14 per tonne)

Accounting entries on settling the obligation—1 April 2016

Entity 1 makes the following accounting entries, when it settles the Liability to deliver allowances made in the previous reporting year:

Dr	Liability to deliver allowances	CU77,000
	Cr Allowances	CU77,000

To recognize the settlement of the obligation by delivering 5,500 allowances.

Scenario 3: Entity 1 has actually emitted 2, 500 tonnes during the last six months of the year, the saving of 500 allowances will be carried forward to the year 2016 and thereafter.

Statement of profit or loss and other comprehensive income	6 months to 30 Jun 2015	6 months to 31 Dec 2015	Full year 2015	3 months to 31 Mar 2016	Total for 15 months	On 1 Apr 2016
	CU	CU	CU	CU	CU	CU
Emission income	0	4,500	4,500		4,500	
Remeasurement	0	0	0	2,500	2,500	0
Profit/(loss)	0	4,500	4,500	2,500	7,000	0
Statement of financial position	Date of allocation 1 Jan 2015	Interim date 30 Jun 2015	Year-end 31 Dec 2015	3-month interim date 31 Mar 2016	Settlement on 1 Apr 2016	
	CU	CU	CU	CU	CU	
Assets						
Allowances	50,000	60,000	45,000	70,000	7,000	
Liabilities						
Liability for expected emissions	(50,000)	(36,000)	0	0	0	
Liability to deliver allowances		(24,000)	(40,500)	(63,000)	0	
Total liabilities	(50,000)	(60,000)	(40,500)	(63,000)	0	
Equity						
Retained earnings			4,500	7,000	7,000	

Accounting entries**On the first day of the year—1 January 2015**

Entity 1 makes the following accounting entry to record receiving the allowances allocated free of charge:

Dr	Allowances (separate asset)	CU50,000
	Cr Liability for expected emissions	CU50,000

To recognize the allowances at their fair value (5,000 tonnes at CU10 per tonne).

At the end of the first six months—30 June 2015

Entity 1 makes the following accounting entries in respect of the first six months of the year:

Dr	Allowances	CU10,000
	Cr Income (remeasurement)	CU10,000

To recognize the increase in the fair value of the allowances held (5,000 tonnes whose price has increased from CU10 to CU12 per tonne)

Dr	Expense (remeasurement)	CU10,000
	Cr Liability for expected emissions	CU10,000

To recognize the increase in the fair value of the Liability for expected emissions (5,000 tonnes whose price has increased from CU10 to CU12 per tonne)

Dr	Liability for expected emissions	CU24,000
	Cr Liability to deliver allowances	CU24,000

To recognize the increase in the Liability to deliver allowances to date (2,000 tonnes measured at CU12 per tonne)

At the end of the year—31 December 2015

Entity 1 makes the following accounting entries in respect of the last six months of the year:

Dr	Expense (remeasurement)	CU15,000
	Cr Allowances	CU15,000

To recognize the decrease in the fair value of the allowances held (5,000 tonnes whose price has decreased from CU12 to CU9 per tonne)

Dr	Liability for expected emissions	CU9,000
Dr	Liability to deliver allowances	CU6,000
Cr	Income (remeasurement)	CU15,000

To recognize the decrease in the fair value of the Liability for expected emissions and the Liability to deliver allowances (total 5,000 tonnes whose price has decreased from CU12 to CU9 per tonne)

Dr	Liability for expected emissions	CU27,000
Cr	Liability to deliver allowances	CU22,500
Cr	Emission income	CU4,500

To recognize the increase in the Liability to deliver allowances to date (4,500 tonnes measured at CU9 per tonne)

**At the end of the next 3 months, immediately prior to settling the obligation—
31 March 2016**

Entity 1 continues to account for the allowances and its liabilities at fair value. Entity 1 makes the following accounting entries in respect of the first three months of the following year:

Dr	Allowances	CU25,000
Cr	Income (remeasurement)	CU25,000

To recognize the increase in the fair value of the allowances held (5,000 tonnes whose price has increased from CU9 to CU14 per tonne)

Dr	Expense(remeasurement)	CU22,500
Cr	Liability to deliver allowances	CU22,500

To recognize the increase in the fair value of the Liability to deliver allowances (4,500 tonnes whose price has increased from CU9 to CU14 per tonne)

Accounting entries on settling the obligation—1 April 2016

Entity 1 makes the following accounting entries, when it settles the Liability to deliver allowances made in the previous reporting year:

Dr	Liability to deliver allowances	CU63,000
Cr	Allowances	CU63,000

To recognize the settlement of the obligation by delivering 4,500 allowances.