

STAFF PAPER

February 2017

IASB Meeting

Project	Rate-regulated Activities		
Paper topic	Illustrative examples		
CONTACT(S)	Jane Pike	jpike@ifrs.org	+44 (0)20 7246 6925
	Michael Stewart	mstewart@ifrs.org	+44 (0)20 7246 6922

This paper has been prepared for discussion at a public meeting of the International Accounting Standards Board (the Board) and does not represent the views of the Board or any individual member of the Board. Comments on the application of IFRS® Standards do not purport to set out acceptable or unacceptable application of IFRS Standards. Technical decisions are made in public and reported in IASB® Update.

Purpose of the paper

1. This paper analyses several examples to illustrate the application of the recognition criteria described in Agenda Paper 9C *Recognition of regulatory assets and regulatory liabilities* to a common range of regulatory adjustments. The examples are grouped into three categories, which correspond to the table included in paragraph 25 of Agenda Paper 9C, which is reproduced in paragraph 4 of this paper.
2. There are no specific questions for the Board included in this paper. However, we invite any questions on the application of the model illustrated in this paper.
3. This paper contains the following examples:
 - (a) Example 1—input price estimation adjustment (paragraphs 6-9);
 - (b) Example 2—fixed cost recovery estimation adjustment (paragraphs 10-14);
 - (c) Example 3—bonus/ penalty adjustments (paragraphs 15-18);
 - (d) Example 4—service performance timing difference adjustment (paragraphs 19-23); and
 - (e) Example 5—construction performance timing difference adjustment (paragraphs 24-29).

4. Regulatory adjustments included in the examples:

	Entity performs to a greater extent than the customer-base: regulatory asset recognised to reflect right to increase rate in future for past entity performance	Entity performs to a greater extent than the customer-base: regulatory liability recognised to reflect obligation to provide future entity performance for reduced/ no compensation/ funding.
estimation adjustments (variance corrections) Examples 1-2	Entity is entitled to recover amounts related to goods or services delivered to the customer-base that are measured at a variable amount, which is higher than the estimated amount charged to the customer-base.	Entity is entitled to recover amounts related to goods or services delivered to the customer-base that are measured at a variable amount, which is lower than the estimated amount charged to the customer-base.
bonus/penalty adjustments Example 3	Entity delivers goods or services at a higher specification than the customer-base has been charged—entity is entitled to further compensation/ funding for the higher performance level.	Entity delivers goods or services at a lower specification than the customer-base has been charged—entity is obliged to compensate the customer-base for the lower performance level.
performance timing differences Examples 4-5	Entity has performed but customers have not yet paid.	Entity has not yet performed but customers have paid.

Examples

5. All examples are based on a water utility, Entity W. Background information about Entity W and its rate-regulatory environment are contained in the appendix. The examples assume that the regulatory adjustments are within the scope of the model, are material to Entity W and are expected to be included within the future regulated rate. For simplicity, the time value of money is assumed to be immaterial.

Example 1—input price estimation adjustment*Fact pattern*

6. The rate-setting mechanism allows Entity W to recover the actual input cost incurred for chemicals used in the treating waste water. As a result, the entity tracks any variances from the estimated input cost included in the rate calculation. Any variance is included in a future regulated rate.
7. During 20X0, the input cost has been stable and no net variance has arisen during the period. The rate regulator anticipates that the input cost for the water treatment chemicals is expected to increase by CU0.04 per unit from 1 January 20X1.¹ In November 20X0, the rate regulator approves the rate to be charged to customers from 1 January 20X1 and the approved rate includes a CU0.04 increase to cover the anticipated input cost increase.
 - (a) At the entity's annual reporting date of 31 December 20X0, the input cost has not changed and the new rate is not yet being charged to customers.
 - (b) On 1 January 20X1, the entity starts to charge the customers the revised rate for all sales from that date. However, from that date, the input cost increased by CU0.03 per unit, instead of the anticipated CU0.04 per unit. At the entity's next (quarterly) reporting date of 31 March 20X1, the cumulative input cost variance is CU1,865 (variance of CU0.01 per unit; quantity of 186,500 units transferred to the customer base in the period).

Applying the model

8. At 31 December 20X0, there is no imbalance in performance between the entity and the customer base—Entity W has billed what it is entitled to bill in exchange for the goods and services delivered to the customer base. There is no variance between estimated price and actual price during 20X0. No regulatory asset or regulatory liability is recognised at 31 December 20X0, because there is no imbalance in performance.

¹ In this Staff Paper, currency amounts are denominated in 'currency units' (CU).

9. At 31 March 20X1, there is an imbalance in performance between the entity and the customer base—the entity has delivered goods and services to the customer base for which it is entitled to recover the actual costs incurred. However, the customer base has paid more than the entity is entitled to in exchange for the goods and services received by the customer base. The rate regulation specifies that this variance will be ‘corrected’ through the next rate review. As a result, the entity will, at 31 March 20X1, recognise a regulatory liability of CU1,865 to reflect its obligation to deliver further goods and services at a reduced rate.

Example 2—fixed cost recovery estimation adjustment

Fact pattern

10. The rate regulator includes an amount of CU1.32 per unit in the regulated rate, intended to recover Entity W’s fixed costs for the next regulatory period, being the four calendar years, 20X1-20X4. That amount includes estimated fixed costs of CU987,500 per year and estimated delivery of 748,100 units per year. Any variances arising are adjusted through the rate for year $n+2$, ie variances arising in 20X1 are adjusted through the rate for 20X3, those arising in 20X2 are adjusted in 20X4, and so on.
11. During 20X1, Entity W incurred fixed costs of CU986,729 and transferred 746,473 units to customers. In the amount billed to customer in exchange for the 746,473 units delivered, Entity W included an amount of CU985,344 ($746,473 \times \text{CU}1.32$) to recover its fixed costs. This means that Entity W under-recovered costs of CU 1,385 ($\text{CU}986,729 - \text{CU}985,344$) during 20X1.
12. During 20X2, Entity W incurred fixed costs of CU990,257 and transferred 753,217 units to customers. In the amount billed to customer in exchange for the 753,217 units delivered, Entity W included an amount of CU994,246 ($753,217 \times \text{CU}1.32$) to recover its fixed costs. This means that Entity W over-recovered costs of CU3,989 ($\text{CU}994,246 - \text{CU}990,257$) during 20X2.

Applying the model

13. At 31 December 20X1, there is an imbalance in performance because Entity W has delivered 746,473 units to the customer base; in exchange Entity W is entitled

to recover the actual costs incurred in delivering those units, which were CU986,729. However, the customer base has performed to a lesser extent because it has paid CU 1,385 less than Entity W is entitled to receive in exchange for the units delivered—the customer base paid CU985,344. Entity W included the CU985,344 in revenue recognised using IFRS 15. Using the model, Entity W also recognises a regulatory asset and corresponding regulatory adjustment in profit or loss of CU1,385, being its right to bill the customer base a higher rate for the goods or services to be delivered in 20X3.

14. At 31 December 20X2, there is an imbalance in performance because Entity W has delivered 753,217 units to the customer base during 20X2; in exchange Entity W is entitled to recover the actual costs incurred in delivering those units, which were CU990,257. However, the customer base has performed to a greater extent than Entity W during 20X2 because it has paid CU3,989 more than Entity W is entitled to receive in exchange for the units delivered—the customer base paid CU994,246. Entity W included the CU994,246 (753,217 x CU1.32) in revenue recognised using IFRS 15. Using the model, Entity W also recognises a regulatory liability and corresponding regulatory adjustment in profit or loss of CU3,989, being its obligation to deliver future units to the customer base at a lower rate.²

Example 3—bonus/ penalty adjustments

Fact pattern

15. The regulatory agreement includes targets for both water quality and continuity of supply. The regulated rate set for the four-year period 20X1-20X4 does not anticipate any bonuses or penalties. The regulatory agreement specifies that the regulated rate will be adjusted in future periods (year n+2) to provide Entity W with bonuses for exceeding targets or penalties for failing to meet targets in each year as follows:
 - (a) Water quality: bonus of CU20,000 or penalty of CU24,000; and

² Staff will ask the Board in a future meeting to consider whether regulatory assets and regulatory liabilities arising from the same source, as demonstrated in this example, can or should be presented gross or net in the statement of financial position.

- (b) Continuity of supply: bonus of CU23,000 or penalty of CU30,000.
16. During 20X1, Entity W exceeded the continuity of supply target and earned a bonus of CU23,000, but failed to meet its water quality target and suffered a penalty of CU24,000.

Applying the model

17. During 20X1, two performance imbalances arise because:
- (a) Entity W's performance regarding the continuity of supply exceeds the customer base's performance. This is because the entity has delivered a higher quality of service than the customer base has paid for. The entity has a right to charge an additional CU20,000 in exchange for the higher service level delivered. This will be charged to customers in 20X3.
- (b) Entity W's performance regarding the quality of water is exceeded by the customer base's performance. This is because the entity has delivered a lower quality of service than the customer base has paid for. The entity has an obligation to 'refund' the CU24,000 overcharged for the lower service level delivered. This obligation will be settled by Entity W delivering services to the customer base in 20X3 at a reduced rate.
18. Using the model, Entity W recognises a gross regulatory liability of CU24,000 for the penalty and a gross regulatory asset of CU23,000 for the bonus, together with a net regulatory debit adjustment in profit or loss of CU1,000.³

Example 4—service performance timing difference adjustment

Fact pattern

19. Entity W owns and operates a water treatment facility close to the coast. An outlet pipe from the facility is located close to a popular beach and recreational area, which is owned and operated by the local government body. During 20X0, the beach and recreational area were damaged by a severe storm. Following

³ Staff will ask the Board in a future meeting to consider whether regulatory assets and regulatory liabilities arising from the same source, as demonstrated in this example, can or should be presented gross or net in the statement of financial position.

negotiations between the rate regulator and Entity W, the regulatory agreement requires Entity W to repair the damage to the beach and recreational area to specified standards in exchange for a fixed fee income of CU200,000. The rate regulator is not responsible for paying the fee to Entity W. Instead, the rate regulator determines that the customer base will provide the funding over the next regulatory period. As a result, the regulated rate for the four-year period 20X1-20X4 includes an amount of CU0.067 per unit, which is intended to recover the fixed fee of CU200,000 over the four-year period, based on estimated delivery of 748,100 units per year. Any under- or over-recovery of the fixed fee at the end of the four-year period will be adjusted through the rate for the next four-year regulatory period.

20. During 20X1, Entity W completed the specified repairs at a cost of CU178,300 and transferred 746,473 units of service to customers. As a result, Entity W included CU50,013 of its fee in the amounts billed to the customer base during 20X1.
21. During 20X2, Entity W transferred 753,217 units to customers and, therefore, recovered a further CU50,466 of its CU200,000 fee through amounts billed to the customer base. At the end of 20X2, Entity W has billed the customer base a total of CU100,479 (CU50,013 + CU50,466) regarding its fee for repairing the damage to the local government's beach and recreational park.

Applying the model

22. At 31 December 20X1, there is an imbalance in performance. This is because Entity W has wholly satisfied its obligation to repair the damage to the beach and recreational area. However, the customer base has, so far, paid only one quarter (CU50,013) of the amount payable to the entity in exchange for the entity's satisfaction of the repair obligation. During 20X1, Entity W includes CU50,013 of its fee in the amounts billed to customers, which is included within the revenue recognised using IFRS 15. Consequently, Entity W recognises a regulatory asset to reflect the disproportionate performance of the entity compared to the customer base. Using the model, Entity W recognises, in addition to the revenue and receivable/ cash recognised using IFRS 15, a regulatory asset of CU149,987 (CU200,000 - CU50,013) and a corresponding regulatory credit adjustment to

profit or loss. Consequently, Entity W recognises a profit of CU21,700 (CU50,013 + CU 149,987 – CU178,300) for the full satisfaction of its beach and recreational park repair obligation during 20X1.

23. During 20X2, Entity W recognises a further CU50,466 of its CU200,000 fee within the revenue recognised using IFRS 15. Entity W then reduces its regulatory asset by the same amount and records a corresponding regulatory debit adjustment in profit or loss. Consequently, Entity W recognises no profit in 20X2 in respect of its beach and recreation park work.

Example 5—construction performance timing difference adjustment

Fact pattern

24. As a result of recent demand growth, the use of Entity W's infrastructure in the area is nearing capacity. To continue to meet its ongoing water quality and availability obligations, Entity W needs to build a new water facility to increase the capacity of its network. Construction will commence January 20X1 and the new facility will begin operating in January 20X3. The construction is estimated to cost CU90 million, to be incurred on a straight-line basis throughout 20X1 and 20X2.
25. The rate regulator approves the construction plan and determines that Entity W is entitled to recover the cost as follows:
- (a) The rate regulator will provide a CU50 million government grant in January 20X1. The rate regulator will not include this amount in future rates.
 - (b) Entity W will borrow CU40 million in January 20X2, which will be recovered through rates on a straight-line basis over 40 years from 1 January 20X1.⁴ The useful life of the new facility is estimated to be 40 years.
26. During 20X1 and 20X2, Entity W constructs the new water facility as planned, incurring costs of CU45 million per year. The entity also receives the government

⁴ In practice, this amount will be adjusted to reflect loan interest and the time value of money but, for simplicity, please ignore interest for the purposes of this example.

grant of CU50 million in January 20X1 and draws down the loan of CU40 million in January 20X2. Entity W also increases the rate charged to customers from 1 January 20X2 and bills an additional CU1 million (CU40 million over 40 years) during 20X2.

Applying the model

27. At 31 December 20X1, the regulator has performed by providing the government grant. Although the entity has incurred costs of CU45 million by constructing the plant, the construction activity increases the entity's own assets: it does not transfer goods or services to the customer base, ie Entity W has not performed. Consequently there is an imbalance in performance. Entity W uses the gross presentation approach in IAS 20 *Accounting for Government Grants and Disclosure of Government Assistance*. As a result, the entity recognises an increase in cash (an asset) and a government grant liability of CU50 million, together with a property, plant and equipment (PPE) asset and related decrease in cash of CU45 million. There is no regulatory asset or regulatory liability to recognise because the imbalance in performance and the construction activity is fully reflected by applying IAS 20 and IAS 16 *Property, Plant and Equipment*.
28. At 31 December 20X2, the customer base has performed by paying bills that include the additional CU1 million that relates to the construction of the new water facility. Although the entity has incurred further costs of CU45 million by continuing to construct the plant, the construction activity further increases the entity's own asset: it does not transfer goods or services to the customer base, ie Entity W has not performed. Consequently there is a further imbalance in performance. At this time, the entity recognises an increase in cash (an asset) of CU41 million, a loan liability of CU40 million and a regulatory liability of CU1 million, together with an increase of the PPE asset and related decrease in cash of CU45 million.
29. When, in January 20X3, Entity W starts to use the new water facility to transfer goods or services to the customer base, the imbalance in performance starts to decrease because the transfers start to settle the entity's obligation to deliver goods or services to customers at a reduced rate. The entity will depreciate the

PPE asset and start to reduce the government grant liability and the regulatory liability by recognising, on a systematic basis, amounts in profit or loss.⁵

⁵ We will bring a paper to a future meeting to discuss how a ‘systematic basis’ could be determined.

Appendix A: Entity W background information

- A1. Entity W is a water utility and is subject to a regulatory framework that includes regulatory adjustments that are within the scope of the proposed accounting model. The other features of the regulatory environment support the enforceability of the rate regulation.
- A2. Entity W:
- (a) is a publicly owned company listed on the Country X stock exchange;
 - (b) prepares IFRS financial statements and a set of regulatory returns for its reporting periods ending 31 December each year;
 - (c) operates under a licence agreement granted by the government to be the sole supplier of clean and waste water services in Country X; and
 - (d) is subject to a well-established and stable system of defined rate regulation, as described in the DP.
- A3. The licence grants Entity W the sole supplier right for an indefinite period, in exchange for Entity W agreeing to provide water services in accordance with the regulatory agreement. The rate regulator, which is a government body, can only terminate the agreement if Entity W persistently fails to satisfy its obligations under the regulatory agreement.
- A4. The regulated rate is reviewed and set every four years; this example considers the position for the next rate period from 1 January 20X1-31 December 20X4. For simplicity, please assume that there are no regulatory balances to carry forward as at 31 December 20X0.
- A5. In mid-20X0, the rate regulator approves Entity W's budgets and forecasts for the four-year period starting 1 January 20X1. Estimated demand for the period is based on population growth forecasts provided by the government of Country X. Steady and continued population growth has occurred around the capital city of Country X and is expected to continue through the next rate review period.