



IASB Meeting—May 2019

Rate-regulated Activities: examples of the model's application

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Purpose of this document

The examples in these slides illustrate the application of the description of the model in the accompanying Agenda Papers 9A-9C for May 2019 Board meeting.

All examples are based on the fact pattern set out in slide 4.

Rights and obligations¹

When, during the current reporting period, an entity subject to defined rate regulation supplies goods or services to customers, the entity obtains one or more of the following:

- a) a present right to charge customers in the current period the regulated rate established for the goods or services supplied during the same period (ie the revenue recognised in accordance with IFRS 15 *Revenue from Contracts with Customers*);
- b) a present right to add an amount to the rate(s) to be charged to customers in future periods because the **total allowed compensation** for the goods or services already supplied exceeds the **amount already charged to customers** (a **regulatory asset**); and
- c) a present obligation to deduct an amount from the rate(s) to be charged to customers in future periods because the **total allowed compensation** for goods or services already supplied is lower than the **amount already charged to customers** (a **regulatory liability**).

¹ See slide 5 of the accompanying Agenda Paper 9E.

Fact pattern

The illustrative examples in the following slides are all based on the following assumptions:

- Entity A – a water utility company – carries out rate-regulated activities in compliance with a regulatory agreement established by the government of Country B and overseen by Regulator C.
- The regulatory agreement grants Entity A the right to supply clean and waste water services in Country B for an indefinite period and provides the right to charge a rate that is set in a manner intended to at least recover Entity A's 'allowable costs'.
- The time value of money is considered to be immaterial in all examples except for examples number six and nine.
- All the transactions or events that result in the recognition of regulatory assets / regulatory liabilities occur in year X0 unless otherwise stated.
- All regulatory assets and regulatory liabilities are ultimately recovered or fulfilled in full.

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Allowable pass-through variance

Fact pattern:

- The regulatory agreement specifies that:
 - allowable input costs, including the cost of chemicals used to treat waste water, are passed through to customers with a 0% margin; and
 - any variances between estimated and actual allowable input costs are passed on to customers and included in the rates charged two years after the year in which the variance arises.
- Entity A was compensated for estimated chemical input costs of CU1,000 through the rates charged to customers in year X0.
- Entity A incurred actual allowable chemical input costs of CU1,060 in its supply of water services to customers during year X0.

Example 1

Allowable pass-through variance (continued)

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Application of the model:

- The total allowed compensation for services already supplied (CU1,060) exceeds the amount already charged to customers (CU1,000).
- As a result, Entity A recognises a regulatory asset reflecting its present right to add the amount of the variance (CU60) in determining the rates to be charged to customers in year X2.

In CU	X0	X1	X2	Total
Revenue	1,000	-	60	1,060
Regulatory income / (expense)	60	-	(60)	-
Operating expenses	(1,060)	-	-	(1,060)
Profit / (loss)	-	-	-	-
Regulatory asset / (liability)	60	60	-	-

Example 2

Chargeable pass-through variance

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Fact pattern:

- Assume the same fact pattern as Example 1, except that actual allowable chemical input costs incurred for supply of water services to customers in year X0 totalled CU920.

Example 2

Chargeable pass-through variance (continued)

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Application of the model:

- The total allowed compensation for the goods or services already supplied (CU920) *is lower than* the amount already charged to customers (CU1,000).
- As a result, Entity A recognises a regulatory liability reflecting its present obligation to deduct the amount of the variance (CU80) in determining the rates to be charged to customers in year X2.

In CU	X0	X1	X2	Total
Revenue ¹	1,000	-	(80)	920
Regulatory income / (expense)	(80)	-	80	-
Operating expenses	(920)	-	-	(920)
Profit / (loss)	-	-	-	-
Regulatory asset / (liability)	(80)	(80)	-	-

¹ Revenue figure for year X2 represents the amount of the pass-through variance that must be deducted in determining the rates to be charged to customers, it is not a debit balance accounted for in the revenue line.

Example 3

Accelerated depreciation or amortisation

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Fact pattern:

- Entity A spends CU300 to upgrade its customer management software on the first day of X0.
- The regulatory agreement specifies that Entity A has the right to be compensated for the cost of the software by including it in the rates charged to customers straight-line over two years, beginning in X0.
- However, the software has a useful economic life of three years, which is the period determined for amortisation in the IFRS financial statements (also straight-line).

Example 3

Accelerated depreciation or amortisation (continued)

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Application of the model:

- In years X0 and X1 the portion of the total allowed compensation for the cost of the software already consumed in the supply of services to customers (CU100 per year—ie the amortisation expense recognised by applying IAS 38 *Intangible Assets*) is lower than the amount already charged to customers (CU150 per year).
- As a result, Entity A recognises a regulatory liability reflecting its present obligation to deduct this amount in determining the rates to be charged to customers in year X2.
- The regulatory liability is fulfilled in year X2 when the total allowed compensation (CU100) exceeds the amount already charged to customers (nil).

In CU	X0	X1	X2	Total
Revenue	150	150	-	300
Regulatory income / (expense)	(50)	(50)	100	-
Operating expenses (amortisation)	(100)	(100)	(100)	(300)
Profit / (loss)	-	-	-	-
Regulatory asset / (liability)	(50)	(100)	-	-

Example 4

Gain on disposal of PPE

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Fact pattern:

- Entity A disposes of PPE, which had an initial cost of CU1,000 and has been accounted for in accordance with IAS 16 *Property, Plant and Equipment*.
- The regulatory agreement specifies that:
 - Entity A has the right to be compensated for the cost of the PPE by adding it to the regulatory capital base (RCB) and including it in the rates charged to customers straight-line over its useful economic life; and
 - any gains or losses on disposal must be passed through to customers evenly over the two subsequent periods via a reduction in the rates charged.
- The PPE has been depreciated at the same rate for regulatory purposes as for IFRS purposes and thus the RCB carrying amount equals the IFRS carrying amount.
- Depreciation of CU920 recognised to date on the PPE has been passed through to customers in the rates charged, with a 0% margin.
- The PPE is disposed for proceeds of CU100, representing a gain of CU20 over the depreciated carrying amount of CU80.

Example 4

Gain on disposal of PPE (continued)

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Application of the model:

- The total allowed compensation for services already supplied, represented by the cost of the consumption of the PPE over this period (CU900—ie the difference between its initial cost and ultimate disposal proceeds) *is lower than* amount already charged to customers (depreciation of CU920).
- As a result, Entity A recognises a regulatory liability reflecting a present obligation to deduct the amount of the gain in determining the rates to be charged to customers in years X1 and X2.

In CU	X0	X1	X2	Total
Revenue ¹	-	(10)	(10)	(20)
Regulatory income / (expense)	(20)	10	10	-
Gain on disposal	20	-	-	20
Profit / (loss)	-	-	-	-
Regulatory asset / (liability)	(20)	(10)	-	-

¹ Revenue figure represents the amount of the gain that must be deducted in determining the rates to be charged to customers, it is not a debit balance accounted for in the revenue line.

Example 5

Pre-funding of construction costs

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Fact pattern:

- Regulator C approves a plan for Entity A to upgrade sections of its network.
- The regulatory agreement establishes that Entity A has the right to be compensated for the costs of the upgrade, with a 0% margin.
- To assist with cash flow needs for the upgrade, Regulator C approves a rate increase that charges customers an incremental CU300 in year X0.
- Entity A carries out the upgrade work in year X1, incurring costs of CU900 recognised as the cost of PPE in accordance with IAS 16, which will be depreciated straight-line over a ten year useful economic life.
- In its regulatory accounts, Entity A recognises CU600 in the RCB in X1, because CU300 of the total CU900 upgrade cost was already charged to customers in year X0.
- The upgraded network comes into use at the start of year X2. The rates charged in each year from X2 onwards include an amount of CU60 over the ten-year useful economic life of the upgraded network, enabling the entity to recover the net CU600 upgrade costs incurred.

Example 5

Pre-funding of construction costs (continued)

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Application of the model:

- In year X0, the total allowed compensation for the regulated water services supplied in the period using the enhanced network (ie nil because the PPE has not yet been placed into service) *is lower than* the amounts already charged to customers (CU300).
- As a result, Entity A recognises a regulatory liability reflecting its present obligation to deduct the CU300 prepayment in determining the rates to be charged to customers in years X2–X11.

In CU	X0	X1	X2	X3-X11	Total
Revenue	300	-	60	60	900
Regulatory income / (expense)	(300)	-	30	30	-
Operating expenses (depreciation)	-	-	(90)	(90)	(900)
Profit / (loss)	-	-	-	-	-
Regulatory asset / (liability)	(300)	(300)	(270)	...	-
PPE balance	-	900	810	...	-

Example 6

Return on RCB

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Fact pattern:

- Entity A spends CU100 on the first day of year X0 which, applying IAS 16, it recognises as the cost of an item of PPE. The item has a useful economic life of five years—X0 to X4.
- The regulatory agreement specifies that Entity A:
 - has the right to be compensated for the cost of the PPE by adding it to the RCB and including it in the rates charged to customers straight-line over its useful economic life; and
 - has the right to be compensated for the effects of the time lag between the cash outflow (CU100 in X0) and related inflows (CU20 per year, X0–X4) by way of an annual return of 8% on the opening balance of the RCB (which is also included in the rates charged to customers).
- For the purposes of this example, it is assumed that an interest rate of 3% would reflect the time value of money and risks inherent in the cash flows arising from the asset.

Example 6

Return on RCB (continued)

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Application of the model:

- Total allowed compensation for services supplied by Entity A each year using the PPE is represented by the cost of consuming the PPE (ie the CU20 per year depreciation expense).
- The return of 8% on the RCB is not linked to the supply of goods or services to customers. It is a return provided by the regulatory agreement to compensate Entity A for the passage of time between cash outflow and inflow. This is part of the regulator's broader objectives which include protecting Entity A's financial viability. Therefore, this return is not part of the total allowed compensation for supply in the period.
- As such, for each of the reporting periods from X0–X4, the amounts of total allowed compensation for services already supplied by Entity A (CU20) *equals* the amount already charged to customers (CU20).

Example 6

Return on RCB (continued)

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Application of the model (continued):

- Entity A does not obtain a present right to add an amount to, or a present obligation to deduct an amount from, the rates to be charged to customers in a future period(s) reflecting goods or services already supplied.
- Entity A does not recognise a regulatory asset or regulatory liability for the return on the RCB.

In CU	X0	X1	X2	X3	X4	Total
Revenue ¹	28	26.4	24.8	23.2	21.6	124
Regulatory income / (expense)	-	-	-	-	-	-
Operating expenses (depreciation)	(20)	(20)	(20)	(20)	(20)	(100)
Profit / (loss)	8	6.4	4.8	3.2	1.6	24
Return included in revenue	8	6.4	4.8	3.2	1.6	24
Regulatory asset / (liability)	-	-	-	-	-	-
PPE (and RCB) balance	80	60	40	20	-	-

¹ X1 revenue: $28 = (100 / 5 \text{ years}) + (100 * 8\%)$;

* RCB decreases because of recovery of CU20 every year X0-X4.

Fact pattern:

- Assume the same fact pattern as Example 1 in slide 6, except that allowable input costs, including any resulting pass-through variances, are charged to customers with a margin of 3%.
- Entity A was compensated for *estimated* chemical input costs of CU1,000 plus the 3% margin (CU1,030) through the rates charged to customers in year X0, but has a right to be compensated for *actual* input costs incurred of CU1,060, plus 3% margin (CU1,092).

Example 7 | Allowable pass-through variance with a margin (continued)

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Application of the model:

- The total allowed compensation for services already supplied (CU1,092) exceeds the amount already charged to customers (CU1,030).
- As a result, Entity A recognises a regulatory asset reflecting its present right to add the amount of the variance, plus 3% margin (CU60 + 3% = CU62), in determining the rates to be charged to customers in year X2.

In CU	X0	X1	X2	Total
Revenue	1,030	-	62	1,092
Regulatory income / (expense)	62	-	(62)	-
Operating expenses	(1,060)	-	-	(1,060)
Profit / (loss)	32	-	-	32
Regulatory asset / (liability)	62	62	-	-

Example 8

Operational incentives

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Fact pattern:

- The regulatory agreement specifies that:
 - the rate charged to customers each year reflects an estimated customer satisfaction level of 88-92%, as monitored through the use of customer surveys; and
 - if the actual result is above or below this estimate, Entity A has a right to add, or an obligation to deduct, CU140 when determining the rate to be charged to customers in the following year.
- At the end of year X0, customer surveys show the actual customer satisfaction result is below 88%.

Example 8

Operational incentives (continued)

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Application of the model:

- The total allowed compensation for services already supplied *is lower than* the amount already charged to customers in year X0 (by the CU140 penalty) because a lower quality of service was ultimately provided, measured by the lower level of satisfaction.
- As a result, Entity A recognises a regulatory liability reflecting its present obligation to deduct the amount of the penalty (CU140) in determining the rates to be charged to customers in year X1.

Example 8

Operational incentives (continued)

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In CU	X0	X1	Total
Revenue ¹	-	(140)	(140)
Regulatory income / (expense)	(140)	140	-
Profit / (loss)	(140)	-	(140)
Regulatory asset / (liability)	(140)	-	-

¹ Revenue figure represents the amount of the penalty that must be deducted in determining the rates to be charged to customers, it is not a debit balance accounted for in the revenue line.

- The model will apply in the same way when Entity A exceeds customer satisfaction targets and earns a right to add a bonus in determining the rates to be charged to customers in year X1 (ie Entity A would recognise a regulatory asset in year X0).

Example 9

Environmental obligations

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Fact pattern:

- The regulatory agreement specifies that:
 - environmental clean-up costs are an allowable expense;
 - Entity A is not allowed to include these costs in the rates charged to customers until after it makes the related cash disbursements; and
 - such costs – plus 2.5% interest – are included on a straight-line basis in the rates charged to customers in the two subsequent years after cash disbursement.
- Entity A recognises an environmental provision in year X0 for clean-up costs of CU1,000 that it estimates it will need to spend in year X20.

Example 9

Environmental obligations (continued)

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Fact pattern (continued):

- The environmental provision is accounted for in accordance with IAS 37 *Provisions, Contingent Liabilities and Contingent Assets*—Entity A discounts the estimated costs and thus recognises a provision of CU610 at the end of X0. The discount (CU390) will be unwound over years X1–X20, resulting in the recognition of finance costs for these years.
- Entity A carries out the clean-up in X20 and spends CU1,000, fulfilling its environmental clean-up obligation.
- It is assumed that the regulatory asset is not subject to any additional risks not present in the environmental clean-up provision.

Application of the model:

- The total allowed compensation for services already supplied include environmental clean-up costs that are ultimately determined to be allowable and – applying IFRS Standards – comprise expenses recognised:
 - at initial recognition of the provision; and
 - for subsequent unwinding of the discount.
- The total allowed compensation in years X0–X20 (CU610 in X0 and unwinding of discount in subsequent years) for services already supplied exceeds the amount already charged to customers (nil) (ie because the amount charged to customers does not reflect Entity A's right to be compensated for the environmental clean-up costs).
- As a result, Entity A recognises a regulatory asset reflecting its present right to add the amount of the environmental clean-up costs in determining the rates to be charged to customers in years X21 and X22.

Example 9

Environmental obligations (continued)

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In CU	X0	X1	X2	X3-19	X20	X21	X22	Total
Revenue ¹	-	-	-	-	-	525	513	1,038
Regulatory income / (expense)	610	15	16	...	24	(500)	(500)	-
Operating expenses	(610)	-	-	-	-	-	-	(610)
Finance costs	-	(15)	(16)	...	(24)	-	-	(390)
Profit / (loss)	-	-	-	-	-	25	13	38
Regulatory asset	610	625	641	...	1,000	500	-	-
Environmental obligation	610	625	641	...	-	-	-	-

Over the years X21–X22, Entity A recovers the regulatory asset by including the allowable cash disbursed in year X20 in the rates charged to customers, along with the return of 2.5%.

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