Price control formula

CP APP08 - Price control formula - Jan2020 - Public

Regulatory proposal 2021–2026

1 Standard Control Services

We propose the form of price control for standard control services to be a revenue cap which is the same as the preliminary position in the framework and approach paper.

The control mechanisms in the framework and approach paper require some adjustment to accommodate the transition from calendar to financial regulatory years.

This attachment proposes control mechanisms for each service classification.

Below are the proposed control mechanisms for standard control services.

Financial year	Control formula
t = 1, 2, 3, 4, 5	$TAR_t \geq \sum_{i=1}^{n} \sum_{j=1}^{m} p_t^{ij} \, q_t^{ij}$
t = 1, 2, 3, 4, 5	$TAR_t = AAR_t + I_t + B_t + C_t$
t = 1	$AAR_t = AR_t \times (1 + S_{CY2021})$
t = 2	$AAR_t = AAR_{t-1} \times (1 + \Delta CPI_t) \times (1 - X_t) \times (1 + S_{CY2022}) \times (1 + S_{HY})$
t = 3, 4, 5	$AAR_t = AAR_{t-1} \times (1 + \Delta CPI_t) \times (1 - X_t)$
t = 1,2	$I_t = f_{t-2} + D_t$
t = 3, 4, 5	$I_t = S_t^{\$} + f_{t-2} + D_t$
t = 1, 2, 3, 4, 5	$B_t = UO + L_{t-2} \times (1 + RoR_t) \times (1 + RoR_{t-1})^{1/2}$
t = 1, 2, 3, 4, 5	$RoR_t = (1 + ROR_t^{real}) \times (1 + \Delta CPI_t) - 1$
t = 1, 2, 3, 4, 5	$\Delta CPI_t = \dfrac{CPI_{Dec\,t-1}}{CPI_{Dec\,t-2}} - 1$

Where:

- TAR_t is the total annual revenue for regulatory year t
- p_t^{ij} is the price of component j of tariff i in the regulatory year t
- q_t^{ij} is the forecast quantity of component j of tariff I in the regulatory year t
- AAR_t is the adjusted annual smoothed revenue for regulatory year t
- I_t is incentive scheme revenue
- B_t is prior year under or over recovery of revenue adjusted for WACC and recovers licence fees
- C_t is any cost pass-throughs for the first half of 2021 as well as for year t
- AR_t is the annual smoothed revenue as stated in the PTRM
- S_{CY2021} is s-factor for the 2019 calendar year performance calculated in accordance with the November 2009 STPIS guideline, but with overlap between regulatory period X_0 calculated as the percentage change between the annual revenue requirement for calendar year 2020 and the annual revenue requirement for financial year 2021/22 taken from the post-tax revenue model

- S_{CY2022} is s-factor for the 2020 calendar year performance calculated in accordance with the November 2009 STPIS guideline, but with overlap between regulatory period X_0 calculated as the percentage change between the annual revenue requirement for calendar year 2020 and the annual revenue requirement for financial year 2021/22 taken from the post-tax revenue model

- S_{HY} is s-factor for the first half of 2021 performance calculated in accordance with the November 2009 STPIS guideline, but with overlap between regulatory period X_0 calculated as the percentage change between the annual revenue requirement for calendar year 2020 and the annual revenue requirement for financial year 2021/22 taken from the post-tax revenue model

- $S_t^\$$ is the s-factor revenue for performance in year t-2 calculated in accordance with the November 2018 STPIS guideline

- X_t is the X factor for each regulatory year as set out in the PTRM, updated annually in accordance with the rate of return guideline, and revised for any contingent projects

- f_{t-2} is the fire start incentive scheme revenue for t -2 financial year performance

- D_t is any demand management incentives applicable for regulatory year t

- UO is the sum of annual adjustment factors in year t as calculated in the unders and overs account. For 2021/22 will incorporate four periods: 2019 actuals, 2020 estimates, 2021 half-year estimates, and 2021/22 forecasts. For 2022/23 will incorporate four periods: 2020 actuals, 2021 half-year actuals, 2021/22 estimates, and 2022/23 forecasts. For remaining years will revert back to: t-2 actuals, t-1 estimates, and t forecasts. Unders and overs amounts will be escalated by the nominal rate of return.

- L_{t-2} are licence fees payable by the DNSP to the Victorian Essential Services Commission in the financial year ending in

- RoR is the calculated nominal rate of return

- ROR^{real} is the real vanilla rate of return for the relevant regulatory year set out in the PTRM and updated annually in accordance with the rate of return guideline

- CPI is the annual percentage change in the ABS CPI all groups, weighted average of eight capital cities from the December quarter of the relevant year.

The same unders and overs timing applies to designated pricing proposal charges and jurisdictional scheme charges.

Below are the proposed side control mechanisms for standard control services which are applied to each tariff class.

Financial year	Side constraint formula
t = 1	No side constraints apply
t = 2	$$\frac{\sum_{i=1}^{n}\sum_{j=1}^{m} p_t^{ij} q_t^{ij}}{\sum_{i=1}^{n}\sum_{j=1}^{m} p_{t-1}^{ij} q_t^{ij}} \leq (1 + \Delta CPI_t) \times (1 - X_t) \times (1 + S_{CY2022}) \times (1 + S_{HY})$$ $$\times (1 + 2\%) + (I_t + B_t + C_t)'\%lculated\ nilla\ rate\ of\ return\ for\ the\ relevant\ regulatory\ year\ ter\ of\ the\ relevant\ yeare\ financie$$
t = 3, 4, 5	$$\frac{\sum_{i=1}^{n}\sum_{j=1}^{m} p_t^{ij} q_t^{ij}}{\sum_{i=1}^{n}\sum_{j=1}^{m} p_{t-1}^{ij} q_t^{ij}} \leq (1 + \Delta CPI_t) \times (1 - X_t) \times (1 + 2\%)$$ $$+(I_t + B_t + C_t)'\%lculated\ nilla\ rate\ of\ return\ for\ the\ relevant\ regulatory\ year\ ter\ of\ the\ relevant\ yeare\ financie$$

Where:

- X_t is the X factor for each regulatory year as set out in the PTRM, updated annually in accordance with the rate of return guideline, and revised for any contingent projects. If X>0, then X will be set to zero for the purposes of the side constraint formula
- $(I_t + B_t + C_t)'$ is the annual percent change in $I_t + B_t + C_t$ from the prior year.

2 Metering Alternative Control Services

We propose the form of price control for metering alternative control services to be a revenue cap which is the same as the preliminary position in the framework and approach paper.

Below are the proposed control mechanisms for metering alternative control services.

Financial year	Control formula
t = 1, 2, 3, 4, 5	$TARM_t \geq \sum_{i=1}^{n} p_t^i q_t^i$
t = 1, 2, 3, 4, 5	$TARM_t = AAR_t + B_t$
t = 1	$AAR_t = AR_t$
t = 2, 3, 4, 5	$AAR_t = AAR_{t-1} \times (1 + \Delta CPI_t) \times (1 - X_t)$
t = 1, 2, 3, 4, 5	$\Delta CPI_t = \dfrac{CPI_{Dec\,t-1}}{CPI_{Dec\,t-2}} - 1$

Where:

- $TARM_t$ is the total annual revenue for metering for regulatory year t

- p_t^i is the price of metering service i in the regulatory year t

- q_t^i is the forecast quantity of metering service i in the regulatory year t

- AAR_t is the adjusted annual smoothed revenue for metering for regulatory year t

- B_t is the sum of annual adjustment factors in year t as calculated in the unders and overs account. For 2021/22 will incorporate four periods: 2019 actuals, 2020 estimates, 2021 half-year estimates, and 2021/22 forecasts. For 2022/23 will incorporate four periods: 2020 actuals, 2021 half-year actuals, 2021/22 estimates, and 2022/23 forecasts. For remaining years will revert back to: t-2 actuals, t-1 estimates, and t forecasts. Unders and overs amounts will be escalated by the nominal rate of return.

- AR_t is the annual smoothed revenue as stated in the PTRM

- X_t is the X factor for metering for each regulatory year as set out in the PTRM, updated annually in accordance with the rate of return guideline

- CPI is the annual percentage change in the ABS CPI all groups, weighted average of eight capital cities from the December quarter of the relevant year

Below are the proposed side control mechanisms for metering alternative control services.

Financial year	Side constraint formula
t = 1	No side constraints apply
t = 2, 3, 4, 5	$\dfrac{p_t^i}{p_{t-1}^i} \leq (1 + \Delta CPI_t) \times (1 - X_t) + B_t'$

Where:

- X_t is the X factor for metering each regulatory year as set out in the PTRM, updated annually in accordance with the rate of return guideline, and revised for any contingent projects. If X>0, then X will be set to zero for the purposes of the side constraint formula

- B_t' is the annual percent change in B_t from the prior year.

3 Public lighting and ancillary (fee-based) alternative control services

We propose the form of price control for public lighting and ancillary (fee-based) alternative control services to be a price cap which is the same as the preliminary position in the framework and approach paper.

We propose the following pricing formula which are consistent with those in the framework and control paper.

2021/22 prices to be no more than those published in the final determination

$$p_t^i = p_{t-1}^i \times (1 + \Delta CPI_t) \times (1 - X_t^i) + A_t^i \qquad \text{for t = 2, 3, 4, 5}$$

Where:

p_t^i is the price cap of service i in the regulatory year t

CPI is the annual percentage change in the ABS CPI all groups, weighted average of eight capital cities from the December quarter of the relevant year

X_t^i is the X factor for service i in regulatory year t as set out in the AER final determination

A_t^i is the sum of any adjustments for service i in regulatory year t. Likely to include, but not limited to adjustments for any approved cost pass through amounts (positive or negative) with respect to regulatory year t, as determined by the AER.

4 Quoted alternative control services

We propose the following pricing formula which are consistent with the framework and approach paper.

Price = Labour + Contractor Services + Materials + Economic cost of tax

Where:

Labour consists of all labour costs directly incurred in the provision of the service which may include labour on-costs, fleet on-costs and overheads. We propose the following formula for escalating labour rates:

2021/22 labour rates to be no more than those published in the final determination

$$l_t^i = l_{t-1}^i \times (1 + \Delta CPI_t) \times (1 - X_t^i) \qquad \text{for t = 2, 3, 4, 5}$$

Where:

- l_t^i is the price cap of labour rate i in the regulatory year t

- CPI is the annual percentage change in the ABS CPI all groups, weighted average of eight capital cities from the December quarter of the relevant year

- X_t^i is the X factor for labour rate i in regulatory year t as set out in the AER final determination

- *Contractor Services* reflect all costs associated with the use of external labour including overheads and any direct costs incurred. The contracted services charge applies the rates under existing contractual arrangements. Direct costs incurred are passed on to the customer

- *Materials* reflects the cost of materials directly incurred in the provision of the service, material storage and logistics on-costs and overheads.

- *Economic cost of tax* is the present value of the distribution network service provider's forecast incremental tax expenditure associated with the provision of the quoted service. The discount rate will be the pre-tax nominal rate of return