Application of the 2018 Rate of Return Instrument to the Victorian Electricity Distribution Networks from 1 January 2021

In the context of the change in regulatory years from a calendar year to a financial year basis.

As discussed at our teleconference on 5 Sept[1], the AER proposes to (substantively) apply the 2018 Rate of Return (RoR) Instrument to the five Victorian electricity distribution networks from 1 Jan 2021 by doing the following:

Return on Debt (RoD):

The AER will move the return on debt trailing average to financial years by using a 6 month '***mini year***' from 1 Jan 2021 to 30 June 2021.

This mini year will be followed by 5 regulatory years, each 12 months long, with the first of these regulatory years commencing on 1 July 2021.

All years (including the mini year) feed into the trailing average. The algebra for this is set out in the modified clause 9′ below, which replaces clause 9 of the 2018 RoR Instrument for the five Victorian electricity distribution networks.

Future weightings applied to historically set annual return on debt numbers (as set out in clause 9′) have been adjusted so there is no change in aggregate future weightings relative to the status quo and there are 11 periods in the trailing average for 10 years.

This requires the service providers to nominate six return on debt averaging periods for the following regulatory 'years':

a) 1 Jan 2021 to 30 June 2021 (the mini year)
b) 1 July 2021 to 30 June 2022
c) 1 July 2022 to 30 June 2023
d) 1 July 2023 to 30 June 2024
e) 1 July 2024 to 30 June 2025
f) 1 July 2025 to 30 June 2026

The algebra for the application of the calculation of the trailing average under this option was provided to regulated businesses previously in spreadsheet form on 16 Aug 2019. Note that in the modified clause 9′, 'transition period' retains the same meaning as in the 2018 RoR Instrument, which is to refer to the transition from an on-the-day debt approach to a trailing average debt portfolio approach. The effect of this is clause 9 of the 2018 RoR Instrument is modified as follows for the Victorian electricity distribution service providers:

9′. For the Victorian electricity distribution networks moving regulatory years from a calendar year basis to a financial year basis, the allowed return on debt for regulatory year t is calculated as follows:

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1 Prior to the meeting on 5 September 2019 there were several teleconferences with representatives of the five Victorian DNSPs and representatives of the Brotherhood of St Laurence and Renew Economy to discuss how to set the WACC from 1 Jan 2021 to 30 June 2026. These included particular consideration of how to set the WACC from 1 Jan 2021 to 30 June 2021. There were also discussions with representatives of the Brotherhood of St Laurence post 5 September 2019. There were also a number of exchanges of material via email. These discussion and exchanges are summarised in Appendix A.

$$If\ t = 1\ ;\ k_t^d = \frac{10-(t-t_s)}{10}\ R_{t_s}\ \ (\text{1st year of the } transition\ period)$$

$$If\ t > t_s \geq t-4;\ k_t^d = \frac{10-(t-t_s)}{10}\ R_{t_s} + \frac{1}{10}\sum_{j=t_s+1}^{t} R_j \qquad (regulatory\ years\ 2\ to\ 5)$$

$$If\ t = 6;\ k_t^d = \frac{10-(t-t_s)}{10}\ R_{t_s} + \frac{1}{10}\sum_{j=t_s+1}^{t} R_j \qquad (regulatory\ year\ 6, a\ six\ month\ period)$$

$$If\ 10 \geq t \geq 7;\ k_t^d = \frac{11.5-t}{10}\ R_{t_s} + \frac{1}{10}\left(\sum_{j=t_s+1}^{5} R_j + \frac{1}{2}R_6 + \sum_{j=7}^{t} R_j\right) (regulatory\ years\ 7\ to\ 10)$$

$$If\ 14 \geq t \geq 11; k_t^d = \frac{1}{20}\ R_{t-10} + \frac{1}{10}\left(\sum_{j=t-9}^{5} R_j + \frac{1}{2}R_6 + \sum_{j=7}^{t} R_j\right) (regulatory\ years\ 11\ to\ 14)$$

$$If\ t = 15; k_t^d = \frac{1}{20}\ R_5 + \frac{1}{20}R_6 + \frac{1}{10}\left(\sum_{j=7}^{t} R_j\right) (regulatory\ year\ 15)$$

$$If\ t > 15;\ k_t^d = \frac{1}{10}\sum_{j=t-9}^{t} R_j \qquad (trailing\ average)$$

Where:

(a) k_t^d refers to the allowed return on debt for ***regulatory year*** t expressed as a percentage, and once finalised, is not updated. k_t^d is deemed to have been finalised on the earlier of:

i. when the AER notifies the ***service provider*** of the annual estimate, or

ii. eight weeks after the end of the (usually annual) ***return on debt averaging period***, calculated in accordance with clause 23, clause 24 and clause 25.

(b) t refers to the ***regulatory year*** for which the allowed return on debt is being calculated, indexed so that first regulatory year of the transition period is t = 1, such that:
t = 1 = calendar year 2016
t = 2 = calendar year 2017
…
t = 5 = calendar year 2020
t = 6 = 1 Jan 2021 to 30 Jun 2021 (mini year)
t = 7 = financial year 2021-22

t = 8 = financial year 2022-23
… and so on

(c) t_s refers to the first ***regulatory year*** of the ***transition period;*** we set t_s = 1 so t_s = t = 1 = calendar year 2016

(d) R_{t_s} refers to the on-the-day rate of return on debt in ***regulatory year*** t_s, and is calculated in accordance with clause 10

(e) j indexes a series of ***regulatory years*** for summation

(f) R_j refers to the on-the-day rate of return on debt in any ***regulatory year*** in the series j, and is calculated in accordance with clause 10

(g) $k_t^d = \frac{10-(t-t_s)}{10}\ R_{t_s}$ refers to the calculation of the allowed return on debt in ***regulatory year*** t, when ***regulatory year*** t is the first year of the ***transition period.***

Note 3: For example, if for a particular service, t_s is 1 (ie, the first ***regulatory year*** of the ***transition period*** for that service):

- and if t **is 1** (ie, the first ***regulatory year*** of the ***transition period***), then

$k_1^d = \frac{10-(1-1)}{10}\ R_1$,as $t_s = t$ ie, $1 = 1$, thus

$k_1^d = R_1$

(h) $k_t^d = \frac{10-(t-t_s)}{10}\ R_{t_s}\ + \frac{1}{10}\sum_{j=t_s+1}^{t} R_j$ refers to the calculation of the allowed return on debt in ***regulatory year*** t during the regulatory years two to six of the ***transition period***.

Note 4: For example, if for a particular service, t_s is 1 (ie, the first ***regulatory year*** of the ***transition period*** for that service):

- and if t **is 2**, then

$k_2^d = \frac{10-(2-1)}{10}\ R_1 + \frac{1}{10}\sum_{j=2}^{2} R_j$ as $t > t_s \geq t-4$ ie, $2 > 1 \geq -2$, thus

$k_2^d = 0.9\ R_1 +\ 0.1 R_2$

- and if t **is 5** (ie, the 5th ***regulatory year*** of the ***transition period***), then

$k_5^d = \frac{10-(5-1)}{10}\ R_1 + \frac{1}{10}\sum_{j=2}^{5} R_j$ as $t > t_s \geq t-4$, ie, $5 > 1 \geq 1$, thus

$k_5^d = 0.6\ R_1 +\ 0.1 R_2 +\ 0.1 R_3 +\ 0.1 R_4 +\ 0.1 R_5$

- and if t **is 6** (ie, the 6th ***regulatory year*** of the ***transition period***, noting that this regulatory year is a six month period), then

$k_6^d = \frac{10-(6-1)}{10}\ R_1 + \frac{1}{10}\sum_{j=2}^{6} R_j$ as $t = 6$, thus

$k_5^d = 0.5\ R_1 +\ 0.1 R_2 +\ 0.1 R_3 +\ 0.1 R_4 +\ 0.1 R_5 +\ 0.1 R_6$

(i) $k_t^d = \frac{11.5-t}{10}\ R_{t_s}\ \ + \frac{1}{10}\left(\sum_{j=t_s+1}^{5} R_j\ + \frac{1}{2} R_6\ \ + \sum_{j=7}^{t} R_j\right)$ refers to the calculation of the allowed return on debt in ***regulatory year*** t during the regulatory years seven to ten of the ***transition period***.

Note 5: For example, if for a particular service, t_s is 1 (ie, the first ***regulatory year*** of the ***transition period*** for that service):

i. and if t **is 8**, then

$k_8^d = \frac{11.5-8}{10} R_{t_s} + \frac{1}{10}\left(\sum_{j=t_s+1}^{5} R_j + \frac{1}{2}R_6 + \sum_{j=7}^{8} R_j\right)$ as $10 \geq t \geq 7$ ie, $10 \geq 8 \geq 7$, thus

$$k_8^d = 0.35\,R_1 + 0.1R_2 + 0.1R_3 + 0.1R_4 + 0.1R_5 + 0.05R_6 + 0.1R_7 + 0.1R_8$$

(j) $k_t^d = \frac{1}{20} R_{t-10} + \frac{1}{10}\left(\sum_{j=t-9}^{5} R_j + \frac{1}{2}R_6 + \sum_{j=7}^{t} R_j\right)$ refers to the calculation of the allowed return on debt in ***regulatory year*** t during the regulatory years eleven to fourteen of the ***transition period***.

Note 5A: For example, if for a particular service, t_s is 1 (ie, the first ***regulatory year*** of the ***transition period*** for that service):

i. and if t **is 12**, then

$k_{12}^d = \frac{1}{20} R_2 + \frac{1}{10}\left(\sum_{j=3}^{5} R_j + \frac{1}{2}R_6 + \sum_{j=7}^{12} R_j\right)$ as $15 \geq t \geq 11$ ie, $15 \geq 12 \geq 11$, thus

$$k_{12}^d = 0.05\,R_2 + 0.1R_3 + 0.1R_4 + 0.1R_5 + 0.05R_6 + 0.1R_7 + 0.1R_8 + 0.1R_9 + 0.1R_{10} + 0.1R_{11} + 0.1R_{12}$$

(k) $k_t^d = \frac{1}{20} R_5 + \frac{1}{20}R_6 + \frac{1}{10}\left(\sum_{j=7}^{t} R_j\right)$ refers to the calculation of the allowed return on debt in ***regulatory year*** t for the regulatory year 15.

Note 5B: For example, if for a particular service, t_s is 1 (ie, the first ***regulatory year*** of the ***transition period*** for that service):

i. and if t **is 15**, then

$k_{15}^d = \frac{1}{20} R_5 + \frac{1}{20}R_6 + \frac{1}{10}\left(\sum_{j=7}^{15} R_j\right)$ as $t = 15$, thus

$$k_{12}^d = 0.05\,R_5 + 0.05R_6 + 0.1R_7 + 0.1R_8 + 0.1R_9 + 0.1R_{10} + 0.1R_{11} + 0.1R_{12} + 0.1R_{13} + 0.1R_{14} + 0.1R_{15}$$

(l) $k_t^d = \frac{1}{10}\sum_{j=t-9}^{t} R_j$ refers to the calculation of the allowed return on debt in ***regulatory year*** t using a ***trailing average portfolio approach***, upon the completion of the move to financial years (ie when t > 15).

Note 5C: For example, if for a particular service, t_s is 1 (ie, the first regulatory year of the transition period):

- And if t **is 17** (ie, the 17th regulatory year), then

$k_{17}^d = \frac{1}{10}\sum_{j=8}^{17} R_j$ as $t > 15$ ie, $17 > 15$, thus

$$k_{17}^d = 0.1\,R_8 + 0.1R_9 + 0.1R_{10} + 0.1R_{11} + 0.1R_{12} + 0.1R_{13} + 0.1R_{14} + 0.1R_{15} + 0.1R_{16} + 0.1R_{17}$$

(finish of clause 9′)

The key rationale for the above approach (relative to maintaining the status quo of calendar years and the 2018 RoR Instrument applying from 1 Jan 2021) is that the approach is approximately NPV neutral. As a result it is, all else equal, both:

- Consistent with the direction of the Victorian government to apply the 2018 RoR Instrument from 1 Jan 2021, and
- Consistent with correct NPV compensation to the regulated businesses over the life of their investments and therefore likely to contribute to the achievement of the NEO to the greatest degree.

In addition, secondary considerations in support of this approach are:

- It is relatively simple to implement, effectively transitioning the trailing average to financial years through the use of an appropriately weighted 6 month mini year from 1 Jan 2021 to 30 June 2021, and
- It is relatively close to the prior trailing average approach

The averaging periods for the 12 month regulatory years from 1 July 2021 to 30 June 2026 must maintain the following modified requirements in clauses 23′ and 24′ for selecting averaging periods, replacing clauses 23 and 24 of the 2018 RoR Instrument:

23′. For the Victorian electricity distribution networks moving regulatory years from a calendar year basis to a financial year basis, the return on debt averaging periods are:

a) The periods nominated by a service provider to which the instrument is being applied and which satisfies the conditions set out in clause 24', whether the periods were nominated before or after the commencement of the Victorian legislation to amend the NEVA;

b) if an averaging period for any regulatory year or the mini year is not nominated in accordance with the conditions set out in clause 23'a), or a period is nominated that does not meet the conditions set out in clause 24' the averaging period shall be a period of 20 consecutive business days in length that finishes 4 months before the start of the applicable regulatory year or mini year.

24′. The return on debt averaging periods nominated in accordance with clause 23′ a) must:

a) be over a period of 10 or more consecutive business days, up to a maximum of 12 months, and

b) start no earlier than 16 months prior to the commencement of the relevant regulatory year or the 'mini year', as applicable and

c) finish no later than 4 months prior to the commencement of the regulatory year, or the mini year as applicable and

d) be specified for each regulatory year within the forthcoming regulatory control period and also for the mini year, and

e) not overlap for each different regulatory year and the mini year although the averaging period is not required to be identical for each regulatory year or the mini year, and

f) not result in the averaging period for the mini year occurring after the averaging period for the financial year commencing 1 July 2021, and

g) be nominated both:

    i. prior to the start of the return on debt averaging period, and

    ii. no later than the lodgement date of the regulatory proposal for the forthcoming regulatory control period

Return on equity

The return on equity will be determined for the following two regulatory time periods:

- 1 Jan 2021 to 30 June 2021 (the 'mini year')
- 1 July 2021 to 30 June 2026 (the five year regulatory control period)

This requires service providers to nominate two return on equity risk free rate averaging periods, one for each of the above regulatory time periods (to determine the RoE for each time period).

The risk free rate averaging period for the regulatory control period from 1 July 2021 to 30 June 2026 must maintain all of the following modified requirements in clauses 7′ and 8′, of the 2018 RoR Instrument. The risk free rate for the 'mini year' must meet all the requirements in the following modified clauses 7″ and 8″ of the 2018 RoR Instrument. This means clauses 7 and 8 of the 2018 RoR Instrument are replaced by modified clauses 7′, 8′, 7″ and 8″.

7′. For the Victorian electricity distribution networks moving regulatory years from a calendar year basis to a financial year basis, the risk free rate averaging period for the five year regulatory control period is:

a) the period nominated by a service provider which satisfies the conditions set out in clause 8′, whether the period was nominated before or after the commencement of the Victorian legislation to amended the NEVA, or

b) if no period is nominated in accordance with clause 7′a), or a period is nominated that does not meet the conditions set out in clause 8′ for the regulatory control period to which this instrument is being applied, a period of 20 consecutive business days in length that finishes 3 months before the start of the regulatory control period on 1 July 2021.

8′. A risk free rate averaging period nominated in accordance with clause 7′a) must:

a) be over a period of 20 or more business days up to a maximum of 60 business days.

b) start no earlier than 7 months prior to the commencement of the regulatory control period on 1 July 2021

c) finish no later than 3 months prior to the commencement of the regulatory control period on 1 July 2021, and

d) be nominated both:

i. prior to the start of the risk free rate averaging period, and

ii. no later than the date of lodgement of the regulatory proposal for the regulatory control period.

7″. For the Victorian electricity distribution networks moving regulatory years from a calendar year basis to a financial year basis, the risk free rate averaging period for the 'mini year' is:

a) the period nominated by a service provider which satisfies the conditions set out in clause 8″, whether the period was nominated before or after the commencement of the Victorian legislation to amend the NEVA, or

b) if no period is nominated in accordance with clause 7″a), or a period is nominated that does not meet the conditions set out in clause 8″ for the regulatory time period to which this instrument is being applied (from 1 Jan 2021 to 30 June 2021), a period of 20 consecutive business days in length that finishes 3 months before the start of the regulatory time period (on 1 Jan 2021).

8″. A risk free rate averaging period nominated in accordance with clause 7″a) must:

a) be over a period of 20 or more business days up to a maximum of 60 business days.

b) start no earlier than 7 months prior to the commencement of the mini year on 1 Jan 2021

c) finish no later than 3 months prior to the commencement of the mini year on 1 Jan 2021, and

d) be nominated both:

i. prior to the start of the risk free rate averaging period, and

ii. no later than the date of lodgement of the regulatory proposal for the forthcoming regulatory control period.

For avoidance of doubt, clauses 7″ and 8″ have been modified because the AER is determining a unique RoE for the mini year, which is the period from 1 Jan 2021 to 30 June 2021. The effect is to treat the period from 1 Jan 2021 to 30 June 2021 as a distinct regulatory time period (even though it may be legally part of an extended regulatory control period under the NEVA changes). This is also consistent with its treatment as a distinct period for the purposes of calculating the annual return on debt and its incorporation into the trailing average return on debt.

Key rationale for the above approaches for equity are:

- using two RoE time periods (and resultant RoE averaging periods) determines the two RoE numbers close to the commencement of each respective regulatory time period
- All else equal, they are consistent with the direction of the Victorian government to apply the 2018 RoR Instrument from 1 Jan 2021, and
- All else equal they are consistent with correct NPV compensation to the regulated businesses over the life of their investments and therefore likely to contribute to the achievement of the NEO to the greatest degree.

Other clauses in the 2018 RoR Instrument

Other than modification to clauses 7, 8, 9, 23 and 24 of the 2018 RoR Instrument set out above, all other clauses of the 2018 RoR Instrument are to be applied as set out in the Instrument. In particular, we note that this means the value of imputation credits is set at 0.585 (clause 27), and this value will be applied from 1 January 2021.

As a result, we expect our modified application of the 2018 RoR Instrument:

- Is consistent with the direction of the Victorian government to apply the 2018 RoR Instrument from 1 Jan 2021
- Is consistent with correct NPV compensation to the regulated businesses over the life of their investments and therefore likely to contribute to the achievement of the NEO to the greatest degree
- Results in consumers being not materially better nor materially worse off (from changes to the Rate of return) as a result of the change from calendar years to financial years.

We also note representatives from the Brotherhood of St Lawrence are generally supportive of the above approaches for applying the 2018 RoR Instrument from 1 Jan 2021.

Appendix A – Stakeholder discussion on how to determine the regulatory weighted average cost of capital (WACC) from 1 Jan 2021 to 30 June 2026

AER staff have had a number of discussions with representatives of the five Victorian DNSPs and consumer representatives on how the regulated WACC might be set from 1 Jan 2021. Key discussions and exchange of information include:

- A teleconference on 18 July 2019 with representatives from the five Victorian DNSPs. During this discussion we proposed we would apply the 2018 RoR Instrument from 1 Jan 2021 in accordance with Vic government direction. We also set out how we proposed this could be done;
- On 19 July 2019 we circulated via email a document to all of the Victorian DNSPs setting out the proposed approach to determining the WACC from 1 Jan 2021 as discussed during the teleconference on 18 July 2019;
- On 24 July 2019 we circulated the document circulated to the Victorian DSNPs on 19 July 2019 to representatives of the Brotherhood of St Laurence and Renew Economy (Renew) for discussion on 25 July 2019.
- On 25 July 2019 we spoke to representatives of the Brotherhood of St Laurence and Renew explained our proposed approach to determining the WACC from 1 Jan 2021 (as discussed with the Vic DNSPs on 18 July 2019 and contained in the document circulated on 24 July 2019). The presence of a representative of Renew reflected the fact the Brotherhood of St Laurence has teamed with the Victorian Council of Social Services (VCoSS) and Renew Economy to lead a consumer response to various stages of the Victorian electricity distribution review process (EDPR).
- On 31 July 2019 we circulated modelling of several alternative debt trailing average options compared against the status quo (that assumes no change to financial year regulatory years) to representatives of the Brotherhood of St Laurence and Renew.
- On 9 August 2019 we received via email a letter in response from the Brotherhood of St Laurence. This letter indicated the Brotherhood of St Laurence had teamed with VCoSS and Renew to lead a consumer response to the various stages of the Victorian EDPR. It also indicated support for our proposed approach for determining the WACC from 1 Jan 2021.
- On 12 August 2019 we received vie email a response from the five Victorian DNSPs to our proposal discussed on 18 July 2019 and circulated on 19 July 2019. This contained a proposed alternative approach.
- A teleconference on 15 August 2019 with representatives from the 5 Vic DNSPs where we discussed their response of 12 Aug 2019, whether the proposed alternative approach would apply the 2018 RoR Instrument from 1 Jan 2021 as directed by the Vic Government and how efficiently incurred incremental hedging costs flowing from the change to financial years should be addressed. In response to concerns raised by the Vic DNSPs around our proposed use of an 18 month regulatory year for debt (in the trailing average), and a 5.5 year regulatory period for determining the return on equity, we proposed alternative options for determining the return on debt and the return on equity. These alternative options involved setting the return on equity separately for the periods from 1 Jan 2021 to 30 June 2021 and from 1 July 2021 to 30 June 2026, and using a six-month period in the trailing average for the period from 1 Jan 2021 to 30 June 2021. AER staff indicated they would circulate the algebra for the trailing average for the Victorian DNSPs to consider.
- On 16 August 2019 we circulated a spreadsheet to representatives of the five Vic DNSPs that set out the trailing average debt option using a 6 month period and a 12 month

period (instead of an 18 month period) for the 18 months from 1 Jan 2021 to 30 June 2022 (as discussed at the teleconference on 15 August).

- On 9 September 2019 we emailed representatives of the Brotherhood of St Laurence indicating we proposed some modification to the way we had proposed to set the WACC in the document circulated to them on 24 July 2019 and set out the proposed modifications (as discussed with representatives of the 5 Vic DNSPs on 15 August).
- On 12 September 2019 we spoke to representatives of the Brotherhood of St Laurence and discussed the proposed approaches set out in our email of 9 September 2019. They indicated general support for our new approach to setting the WACC from 1 Jan 2021, with some reservations including around allowances for hedging costs and any potential for gaming averaging periods.