



# ***POWER AND WATER CORPORATION***

***2020-21 Annual Pricing proposal***

***System Control and Market Operator***

***31 March 2020***

## *Table of Contents*

Summary.....	3
Higher proposed charges for 2020-21 .....	3
Bill impacts .....	3
COVID-19 .....	4
1. Background.....	5
1.1. Relevant context .....	5
1.2. Purpose .....	5
1.3. Method to calculate annual charges .....	5
1.4. Structure of proposal .....	6
2. Proposed System Control Charges for 2020-21 .....	7
3. Proposed Market Operator Charges for 2020-21 .....	8
Glossary .....	9

## SUMMARY

This document is our 2020-21 Annual Pricing Proposal relating to system control and market operator charges for 2020-21. Power and Water Corporation (Power and Water) provides system control and market operator functions under our System Control Licence. The charges for these services are regulated by the Utilities Commission of the Northern Territory (Commission).<sup>1</sup>

In April 2019, the Commission published a final decision on our system control and market operator charges for 2019-24 (Final decision).<sup>2</sup> This included an approved charge for 2019-20 and indicative charges for the remaining years of the period. The charge was based on the revenue divided by the energy forecast.

We are required to submit an annual pricing proposal to the Commission which updates the indicative charge in the Final Decision for inflation, X-factor price movements, updated energy forecasts, under-over recovery amounts, and pass through amounts.

### Higher proposed charges for 2020-21

Table 1 shows that our proposed system control and market operator charges for 2020-21 are materially higher than 2019-20.

**Table 1: Comparison of 2019-20 approved and 2020-21 proposed system control and market operator charges**

	2019-20 approved charge (\$/kWh, nominal)	2020-21 proposed charge (\$/kWh, nominal)
System control*	0.0048	0.0055
Market operator*	0.00052	0.00059

\*Charges have been rounded to 4 decimal places for System Control charges and 5 decimal points for market operator charges consistent with the Commission's Final Decision.

The key reason for higher charges relates to lower energy forecasts than applied in the Final Decision. In our regulatory proposal to the Commission, we had submitted Australian Energy Market Operator (AEMO) forecasts that related to energy sent out data. Upon reflection, we should have provided forecasts based on energy delivered from the grid which is the measure we use to levy charges. Energy delivered from the grid is significantly lower than energy sent out due to power losses and consumption behind the meter. Further, our actual energy consumption has been lower than the projected change in AEMO's forecasts.

### Bill impacts

Table 1 outlines the bill impact to typical customer types from increases in the proposed change in system control and market operator charges. The table shows that all these customer types will experience a 15 per cent increase in system control and market operator charges.

<sup>1</sup> The system control charge relates to customers connected to the Darwin-Katherine, Tennant Creek and Alice Springs regulated networks. The Market Operator charge only relates to customers connected to the Darwin-Katherine network.

<sup>2</sup> [https://utilicom.nt.gov.au/\\_\\_data/assets/pdf\\_file/0009/746190/Final-Decision-2019-System-Control-Charges-Review.pdf](https://utilicom.nt.gov.au/__data/assets/pdf_file/0009/746190/Final-Decision-2019-System-Control-Charges-Review.pdf)

Table 2: Change in a typical customer’s system control and market operator bill between 2019-20 and 2020-21

Customer Type	Total charge (\$, nominal)		Increase	
	2019-20	2020-21	\$	%
Small Residential - Accumulation Meter (8500 kWh pa)*	\$45	\$52	\$7	15%
Small Residential - Smart Meter (8500 kWh pa)*	\$45	\$52	\$7	15%
Large Residential - Accumulation Meter (15,000 kWh pa)*	\$80	\$92	\$12	15%
Large Residential - Smart Meter (15,000 kWh pa)*	\$80	\$92	\$12	15%
Non-Residential -Accumulation Meter (30,000 kWh pa)*	\$160	\$183	\$24	15%
Smart Meter (30,000 kWh pa)*	\$160	\$183	\$24	15%
Industrial (1,000,000 kWh pa - LV)	\$5,320	\$6,105	\$785	15%
Large Industrial (6,000,000 kWh pa - HV)	\$31,920	\$36,628	\$4,708	15%

Currently, customers who consume less than 750MWh are subject to retail price protection under the Northern Territory Government Electricity Pricing Order (NT Pricing Order). We anticipate that the Pricing Order will continue into 2020-21, and that current retail prices for electricity will be frozen.<sup>3</sup> This means that the changes in Power and Water’s charges in 2020-21 will not impact retail electricity bills.

Our major energy customers are not currently protected by the Pricing Order. We note that Power and Water’s proposed reductions to network bills as outlined in our 2020-21 Network Pricing Proposal will result in lower combined network, system control and market operator bill than in 2019-20.<sup>4</sup> However, we recognise that 20 per cent of major customers are expected to receive a slight network price increase.<sup>5</sup>

## COVID-19

The emergence of COVID-10 virus in Australia is likely to inflict hardship on our customers. Power and Water remains committed to providing our customers with essential gas, electricity and water services during this time of crisis, and assisting our customers to the full extent possible.

This proposal has not incorporated the potential impacts of the COVID-19 pandemic on our energy forecasts. This is consistent with our approach for our 2020-21 Network Pricing Proposal to the AER.

The COVID-19 pandemic has been unfolding at great speed, and at this time we are uncertain of its economic impact in the Northern Territory. We expect that lower tourism and demand for products will materially reduce energy consumption and demand volumes of our non-residential sector. However, we have not been able to model the impact of COVID-19 in time to meet the deadline for this proposal.

We would like to discuss this issue further with the Commission and our stakeholders to determine the most pragmatic way forward in finalising and approving our system control and market operator charges for 2020-21.

<sup>3</sup> In March 2020, the Northern Territory Government announced a freeze on electricity charges. The Government noted that “all regular increases to government fees and charges, including electricity costs, will be put on hold. This means that fees and charges which are normally increased annually or regularly will not be”

<sup>4</sup> For an industrial customer consuming 1,000,000 kWh per annum the reduction in the combined network, system control and market operator charges from 2019-20 to 2020-21 is estimated to be \$149.28, while for large industrial customers consuming 6,000,000 kWh, the reduction would be \$5,479.67.

<sup>5</sup> Please see: Power and Water, Network Pricing Proposal 2020-21, 31 March 2020.

## 1. BACKGROUND

### 1.1. Relevant context

Power and Water Corporation (Power and Water) holds a System Control Licence to conduct system control and market operator functions.<sup>6</sup> The services are provided by an independently operated business unit within PWC, termed System Control and Market Operator (System Control).

Under Northern Territory legislation, a system controller is entitled to impose and recover charges relating to the operations of system control. The legislation states that the schedule of charges is to be approved by the Commission.

On 30 April 2019, the Commission published a Final Decision on the charges that the system controller could apply from 1 July 2019. This decision approved the charge that Power and Water would apply in 2019-20, and set out indicative charges for the 2020-21 to 2023-24 regulatory years. The charge is payable by retailers based on energy consumed by customers in the Darwin-Katherine, Alice Springs, and Tennant Creek regulated areas for system control charges, and based on energy consumed by customers in the regulated Darwin-Katherine Interconnected System only for market operator charges.

### 1.2. Purpose

Power and Water must submit an annual pricing proposal to the Commission in March of each year which sets out our proposed system control and market operator charges for the following financial year. The Commission's final decision set out a formula for the operation of a revenue cap and an under-over recovery mechanism. Since the final decision, the Commission has provided further clarity on the source of inputs we must apply when applying these mechanisms.<sup>7</sup>

This 2020-21 Annual Pricing Proposal is our first pricing proposal to the Commission for the 2019-24 regulatory period.

### 1.3. Method to calculate annual charges

The revenue cap formula in the Final Decision requires Power and Water to update the annual indicative smoothed revenue in the final decision for system control and market operator charges respectively. The first step in the formula is to calculate the adjusted annual smoothed revenue requirement (ARR) for 2020-21. This is calculated by adjusting the 2019-20 AAR by most recent data on actual inflation, and the X-factor in the final decision.<sup>8</sup>

The second step is to calculate the total allowed revenue (TAR) for 2020-21. This is the sum of the AAR for 2020-21, the under-over recovery amount for previous years, and the costs associated with certain events

---

<sup>6</sup> Power and Water, as the licensed system controller, carries out system control and market operator functions in accordance with section 38 of the Electricity Reform Act 2000 (the Act) and the System Control Technical Code (SCTC).

<sup>7</sup> The UC wrote to Power and Water on 2 January 2020, clarifying that Power and Water should use the ABS CPI All Group, Weighted Average of Eight Capital Cities for the December (2019) quarter and the same source as used for the kWh forecast in the Final Decision, but updated with actuals. In an email on 12 February 2020, Power and Water staff raised a concern about using the same source as final decision (AEMO energy sent out) for energy forecasts. On 19 February 2020, UC staff responded via email agreeing with PWC's proposed revised approach to use the identical energy forecast source as the Australian Energy Regulator pricing proposal from 2020-21.

<sup>8</sup> The specific formula is  $AAR_t = AAR_{t-1} \times (1 + \Delta CPI_t) \times (1 - X_t)$  as set out on page 15 of the Commission's final decision.

## Power and Water Corporation - 2020-21 Annual Pricing proposal - System Control and Market Operator

defined by the Commission.<sup>9</sup> Subsequently, the Commission has advised Power and Water that other costs outside those contemplated in the final decision may be the subject of a pass through event.

The final step is to calculate the respective charge for system control and the market operator. This is the TAR divided by the relevant energy forecast. On 12 February 2020, Power and Water staff raised a concern about using the same source as final decision (AEMO energy sent out) for energy forecasts. On 19 February 2020, UC staff responded via email agreeing with Power and Water's proposed revised approach to use the identical energy forecast source as the 2020-21 Network Pricing Proposal we submit to the AER in March 2020.

### 1.4. Structure of proposal

Chapter 3 identifies our proposed system control charge for 2020-21, and the underlying inputs and calculations to derive the charge. Chapter 4 identifies our proposed market operator charge for 2020-21, and the underlying inputs and calculations to derive the charge.

---

<sup>9</sup> The specific formula is  $TAR_t = AAR_t + B_t + C_t$ .  $B_t$  is the true-up in year t for any under or over recovery of actual revenue collected through the system control or market operator charge.  $C_t$  is: the costs in year t associated with the proposed new Control and Administrative Centre, when approved by the Commission; the change in costs in year t associated with a change in the market and operator functions; and change in the allocation of direct costs and corporate overheads in year t arising from these events. This is set out on Page 15 of the Commission's final decision

## 2. PROPOSED SYSTEM CONTROL CHARGES FOR 2020-21

Power and Water has applied the prescribed formula in the Commission’s final decision and subsequent correspondence to calculate our proposed system control charge for 2020-21. The key inputs we have used to calculate the system control charge are identified in Table 3 below.

The first step is to calculate the adjusted annual smooth revenue requirement (AAR) for 2020-21. This is achieved by adjusting the smoothed revenue in the 2019-20 Final Decision for most recent inflation data, and the 2020-21 X-factor in the decision. The second step is to calculate the TAR by summing the ARR for 2020-21, pass through amounts, and under-over recovery amounts. We have no pass through amounts approved or for approval in 2019-20. The under-over recovery formula has no application in 2020-21 as this relates to a 2 year lag.

The last step to derive the system control charge is to divide the TAR by the forecast energy consumption for the 3 regulated networks. We have applied the energy forecast provided in our 2020-21 Network Pricing Proposal to the AER, as required by the Commission.

**Table 3: Key inputs to derive system control charges for 2020-21**

Terms	Input	Source / underlying values to calculate input
Adjusted annual smoothed revenue requirement in 2019-20 ( $AAR_{t-1}$ )	\$8,787,141	Smoothed revenue for 2019-20 as per Table 5 of Commission’s final decision. No adjustment from smoothed revenue ( $Ar_t$ ) in 2019-20 as prescribed in revenue cap formula (ie: $Ar_{t-1} = AAR_{t-1}$ )
Inflation update ( $CPI_t$ )	1.84%	Reflect the December 2019 ABS update, consistent with Commission advice of 2 January 2020.
X-factor ( $X_t$ )	1.02%	Table 5 of UC’s final decision
Adjusted annual smoothed revenue requirement in 2020-21 ( $AAR_t$ )	\$8,857,589	This is calculated as adjusted annual smoothed revenue in 2019 multiplied by 1+ change in CPI multiplied by 1+X-factor. Mathematically: $AAR_t = AAR_{t-1} \times (1 + \Delta CPI_t) \times (1 - X_t)$
Pass through amounts ( $C_t$ )	\$0	We have not sought a pass through amount from the Commission in 2019-20.
True-up for under-over recovery adjustment ( $B_t$ )	\$0	The under-over recovery mechanism has no application in 2020-21, due to 2 year lag. This was clarified in Commission advice on 19 February 2020.
Total Allowable Revenue in 2020-21 ( $TAR_t$ ) (\$, nominal)	\$8,857,589	This is the sum of $AAR_t$ , pass through amounts and under-over recovery amounts.
Energy forecast for 2020-21 for 3 regulated networks (kwh)	1,606,824,869	This is the energy consumption forecast for 2020-21 for the 3 regulated networks, consistent with the total energy consumption forecast submitted in our AER Network Pricing
<b>Proposed system control charge for 2020-21 (\$/kwh, nominal)</b>	<b>\$0.0055*</b>	This is the Total Allowed Revenue divided by the energy forecast for 2020-21 for 3 regulated networks

\*Charges have been rounded to 4 decimal places for System Control charges consistent with the Commission’s Final Decision

### 3. PROPOSED MARKET OPERATOR CHARGES FOR 2020-21

Power and Water has applied the prescribed formula identified in the Commission’s final decision and subsequent correspondence. The key inputs we have used to calculate the market operator charges are identified in Table 4 below.

The first step is to calculate the adjusted annual smooth revenue requirement (AAR) for 2020-21. This is achieved by adjusting the smoothed revenue in the 2019-20 Final Decision for most recent inflation data, and the 2020-21 X-factor in the decision. The second step is to calculate the TAR by summing the ARR for 2020-21, pass through amounts, and under-over recovery amounts. We have no pass through amounts approved or for approval in 2019-20. The under-over recovery formula has no application in 2020-21 as this relates to a 2 year lag.

The last step to derive the market operator charge is to divide the TAR by forecast energy consumption for the Darwin-Katherine region only, consistent with the Commission’s approach in the final decision. This is the energy forecast in our 2020-21 Network Pricing Proposal to the AER, but only the proportion relating to Darwin-Katherine. This was based on AEMO’s split of energy consumption by region.

**Table 4: Key inputs to derive market operator charges for 2020-21**

Terms	Input	Source / underlying values to calculate input
Adjusted annual smoothed revenue requirement in 2019-20 ( $AAR_{t-1}$ )	\$821,515	Smoothed revenue for 2019-20 as per Table 5 of Commission’s final decision. No adjustment from smoothed revenue ( $Ar_t$ ) in 2019-20 as prescribed in revenue cap formula (ie: $Ar_{t-1} = AAR_{t-1}$ )
Inflation update (CPI <sub>t</sub> )	1.84%	Reflect the December 2019 ABS update, consistent with Commission advice.
X-factor ( $X_t$ )	1.63%	Table 5 of Commission’s final decision
Adjusted annual smoothed revenue requirement in 2020-21 ( $AAR_t$ )	\$822,998	This is calculated as adjusted annual smoothed revenue in 2019 multiplied by 1+ change in CPI multiplied by 1+X-factor. Mathematically: $AAR_t = AAR_{t-1} \times (1 + \Delta CPI_t) \times (1 - X_t)$
Pass through amounts ( $C_t$ )	\$0	We have not sought a pass through amount from the Commission in 2019-20.
True up for under-over recovery adjustment ( $B_t$ )	\$0	The under-over recovery mechanism has no application in 2020-21, due to 2 year lag. This was clarified in Commission advice on 19 February 2020.
Total Allowable Revenue in 2020-21 ( $TAR_t$ ) (\$, nominal)	\$822,998	This is the sum of $AAR_t$ , pass through amounts and under-over recovery amounts.
Energy forecast for 2020-21 for 3 regulated networks (kwh)	1,389,629,382	This is our estimate of the forecast energy consumption for 2020-21 that relates only to Darwin-Katherine. We have assumed that 86.4% of total energy consumption is related to Darwin-Katherine consistent with the proportion in AEMO’s forecast of energy sent out in our 2019-24 regulatory proposal.
<b>Proposed market operator charge for 2020-21 (\$/kwh, nominal)</b>	<b>\$0.00059</b>	This is the Total Allowed Revenue divided by the energy forecast for 2020-21 for 3 regulated networks

\*Charges have been rounded to 5 decimal places for Market Operator charges consistent with the Commission’s Final Decision



## GLOSSARY

AARt	Adjusted annual revenue
AER	Australian Energy Regulator
AEMO	Australian Energy Market Operator
Commission	Utilities Commission of the Northern Territory
CPI	Consumer Price Index
Final Decision	Final Decision: 2019-System Control Charges Review
kWh	Kilowatt hour
MW	Megawatt
MWh	Megawatt hour
Power and Water	Power and Water Corporation
TAR	Total allowable revenue