2022-23 Tariff Compliance Statement

General Statement

31 May 2022

Port of Melbourne

This page is intentionally left blank

Contents

Abbreviations and acronyms

Term	Description
AASB	Australian Accounting Standards Board
ABBM	Accrual Building Block Methodology
ABS	Australian Bureau of Statistics
AER	Australian Energy Regulator
ARR	Aggregate Revenue Requirement
ATO	Australian Taxation Office
BHM	Brailsford, Handley, and Maheswaran
BISOE	BIS Oxford Economics
Black CAPM	Black Capital Asset Pricing Model
bp	Basis points
CGS	Commonwealth Government Securities
CRM	Customer Relationship Management system
DDM	Dividend Discount Model
DoA	Delegations of Authority
DPWA	DP World Australia
ECI	Early Contractor Involvement
ELT	Executive Leadership Team
EPCG	Enterprise Project Control Group
EPMF	Enterprise Project Management Framework
ERA	Economic Regulation Authority (Western Australia)
ESC	Essential Services Commission
HER	Historical Excess Returns
ICT	International Container Terminal
IFCBAA	International Forwarders & Customs Brokers Association of Australia Ltd
IMO	International Maritime Organization
IPART	Independent Pricing and Regulatory Tribunal
IRC	Investment Review Committee
ISO	International Organisation for Standardisation
LTI	Long-term incentive
MRP	Market Risk Premium
MUA	Maritime Union of Australia
NPV	Net Present Value
NZCC	New Zealand Commerce Commission
PCC	Project consultative committee

PCD	Port Concession Deed
PCEP	Port Capacity Enhancement Program
PCG	Project Control Group
PCP	Port Capacity Project
PDIP	Port Development Implementation Plan
PDS	Port Development Strategy
PLT	Port Lease Transaction
PMA	Port Management Act 1995
PoM	Port of Melbourne
PRTA	Port Rail Transformation Agreement
PRTP	Port Rail Transformation Project
QCA	Queensland Competition Authority
R&M	Repairs and Maintenance
RTS	Reference Tariff Schedule
SAMP	Strategic Asset Management Plan
SDE	Swanson Dock East
SDW	Swanson Dock West
SL-CAPM	Sharpe-Lintner Capital Asset Pricing Model
SOCI	Security of Critical Infrastructure Act 2018
STI	Short-Term Incentive
TAL	Tariffs Adjustment Limit
TCS	Tariff Compliance Statement
TEC	Total Employment Cost
TEU	Twenty-foot equivalent unit
VICT	Victoria International Container Terminal
VPCM	Victorian Ports Corporation (Melbourne)
VPMF	Voluntary Performance Modelling Framework
VTS	Vessel Traffic Services
WACC	Weighted Average Cost of Capital
WASC	Western Australian Supreme Court
WATI	Weighted Average Tariff Increase
WDE	Webb Dock East
WGTP	West Gate Tunnel Project
WPI	Wage Price Index

Supporting documents

Table i lists the supporting documents that are incorporated within, and form a part of, Port of Melbourne's (PoM's) 2022-23 Tariff Compliance Statement (TCS).

Table i 2022-23 TCS supporting documents

Appendix	Title
A	2022-23 Reference Tariff Schedule
B	Regulatory Model
C	Regulatory Model User Guide
D	Regulatory Model revisions (confidential)
E	2022 Consultation Paper
F	2022 Industry Consultation Presentation
G	Summary of consideration of stakeholder comments
H	GHD 2022 Industry Consultation Post Engagement Review
I	HoustonKemp, Estimation of the weighted average cost of capital for the Port of Melbourne
J	HoustonKemp, WACC data (confidential)
K	BISOE Trade Outlook
L	BISOE Demand models (confidential)
M	PoM Demand models (confidential)
N	KPMG 2020-21 Audited revenue
O	Contracts for prescribed services (confidential)
P	Capitalisation of costs (confidential)
Q	Opex analysis models (confidential)
R	Regulatory Cost Allocation Guideline (confidential)
S	Compliance with Pricing Order

Executive Summary

Purpose of this document

PoM is required to submit an annual Tariff Compliance Statement (TCS) to the Essential Services Commission (ESC) by no later than 31 May each year[1] that demonstrates how its tariffs for Prescribed Services for the upcoming financial year comply with the Pricing Order.

Prescribed Services include the provision of channels, berths, short-term storage and access to wharves, roads and rail. The leasing of space and facilities on Port land are classified as non-Prescribed Services. These non-Prescribed Services are not subject to the Pricing Order with our associated charges based on commercial agreements. Non-Prescribed Services are not covered by this TCS.[2]

This 2022-23 TCS General Statement and the appendices that support, and form part of, the 2022-23 TCS, demonstrate how PoM has complied with:

- Clause 7 of the Pricing Order, which sets out the required contents for the TCS; and
- The relevant provisions of the undertaking agreed with the Victorian Government on 20 May 2022 (the Undertaking).

Appendix S to this TCS is a compliance checklist, which cross references the contents of the TCS to the relevant provisions of the Pricing Order and Undertaking.

We are continuing to invest in the port for the benefit of Victorian consumers and the State

As Australia's largest port, the Port of Melbourne is a vital trading gateway for south-eastern Australia, facilitating more than one-third of the nation's container trade and playing a critical role as a key driver of economic activity.

PoM's **stewardship obligations** under the Port Lease require PoM to:

- Manage, operate and maintain the Port in accordance with Good Operating Practice[3];
- Ensure the Port is capable of providing access to shipping, including being able to reasonably accommodate changing vessel sizes; [4]
- Develop the Port land and infrastructure to:
  - Cater for actual and reasonably anticipated growth;
  - Provide quality and efficiency standards expected of a major port; and
  - Maintain the Port's leading position among major Australian ports in terms of its quality, efficiency and effectiveness.[5]

Since the Port Lease Transaction in November 2016, PoM has invested more than $370m to support trade growth and delivered a $9.7b benefit to the Victorian community. The Port is focused on providing world-class port facilities and services when they are needed. Our long-term plans envisage $2b pipeline of investment in Australia's supply chain infrastructure over the next 10+ years to cater for growth, drive

[1] Under clause 7.1.1(a) of the Pricing Order
[2] The ESC undertakes periodic reviews of our rental agreements with Port tenants in accordance with section 53 of the *Port Management Act (Victoria) 1995*.
[3] Where 'Good Operating Practice' means: adherence to a standard of practice which includes the exercise of that degree of skill, diligence, due care, prudence and foresight which would reasonably be expected of a reasonably experienced, competent, prudent and qualified operator of the Port; and provision of appropriate services and facilities for the ease of access to, expeditious and safe movement in and efficient use of the concession area and port infrastructure by vessels, vehicles and other users of the Port.
[4] Port Lease, clause 8.2 and 8.4
[5] Port Lease, clause 26

efficiencies and deliver the productivity that will support the state's economic growth, job creation and social prosperity – and to be delivered without exceeding regulated price thresholds.

This TCS demonstrates our plans to efficiently invest in the provision of Prescribed Services for the long-term interests of users and Victorian Consumers.

PoM's gross prescribed capex forecast for the 2022-23 Regulatory Period is $192.8m. More than two-thirds of the forecast is comprised of the following projects:

- **Port Rail Transformation Project** (PRTP), which will provide improved access for regional Victoria and interstate rail services and the infrastructure and operational arrangements to support the delivery of metropolitan Port Rail Shuttle services. The PRTP will also assist in making rail more competitive with road and meeting the State's Rail Mode Shift Target of 10% of containers moved by rail;
- **Swanson Dock West remediation**, which will ensure that we maintain the minimum service levels specified in the Port Concession Deed (i.e. wharf load factors and remaining service life) and that the port is maintained in accordance with Good Operating Practice; and
- **Webb Dock East Berth Extension**, which is required to meet our obligations under the Port Lease to manage, operate and maintain the Port in accordance with Good Operating Practice, and ensure that the Port is able to reasonably accommodate vessels of the size and type reasonably required to meet trade requirements.

Tariffs and revenue requirement

The Tariffs Adjustment Limit (TAL) under the Pricing Order limits annual weighted average price increases to the change in the Consumer Price Index (CPI). Our tariffs for Prescribed Services will increase by 5.1% on 1 July 2022 for the 2022-23 Financial Year, in accordance with the increase in the CPI for the year to March 2022. All Prescribed Services Tariffs will change by the same percentage adjustment.

Table 1 below sets out our forecast Aggregate Revenue Requirement (ARR) and Prescribed Services revenue (subject to the TAL) for 2022-23.

The ARR for 2022-23 is $449.7 million. This ARR includes $96.0m in depreciation on existing and new assets in 2022-23. While we are not forecasting any unrecoverable revenue in 2022-23, the revenue from Prescribed Services tariffs is not sufficient to recover the full amount of depreciation forecast for 2022-23, and as such, $75.2m of depreciation is forecast to be deferred for recovery in later years in accordance with the depreciation methodology we have adopted to smooth prices over the lease period.

Table 1 ARR and Prescribed Services (subject to the TAL), $ million

	2022-23 (F)
Return on capital	467.5
Return of capital (depreciation)	96.0
Operating expenses (opex)	150.9
Indexation allowance	-264.7
Total ARR	**449.7**
TAL (%)	5.1%
Prescribed Services revenue (subject to the TAL) plus revenue from legacy contracts	449.7
Depreciation from 2022-23 deferred for recovery in future years	75.2

Note: numbers may not sum due to rounding

Our response to the ESC's five-yearly review

On 28 January 2022, the ESC published its final report on its first inquiry into PoM's compliance with the Pricing Order for the five-year period from 1 July 2016 to 30 June 2021 (the review period).[6]

The key findings of the ESC were as follows:

- The ESC made a finding of significant and sustained non-compliance in relation to the rate of return (and therefore ARR), and with respect to consultation with Port Users;
- The ESC found sustained non-compliance in relation to PoM's operating expenditure forecasts, cost allocation, tariffs, and the content of Tariff Compliance Statements. The ESC found that the impacts of these non-compliances were immaterial (not significant); and
- The ESC found PoM was compliant in relation to its capital expenditure, depreciation (including the deferral of depreciation) and demand forecasting.

On 20 May 2022, the Victorian Government accepted an Undertaking prepared by PoM in response to the ESC inquiry. The Undertaking and associated response outline the actions PoM has taken to remedy the non-compliance identified by the ESC and our commitment to ensure compliance going forward.[7]

The Undertaking has been accepted by the ESC Minister as appropriate to adequately address PoM's non-compliance, and is legally binding until 30 June 2027, in line with the ESC's next review. PoM considers that the Undertaking will provide the appropriate degree of certainty to PoM and to Port Users for the next five years until the ESC completes its next review of PoM's compliance with the Pricing Order. The Undertaking:

- Commits to the approaches that will be applied by PoM to calculate the Weighted Average Cost of Capital (WACC), which addresses the ESC's findings on return on capital and ARR.
- Outlines PoM's commitment to develop and publish a Pricing Order Engagement Protocol which will, among other internal process initiatives, improve PoM's engagement practices under the Pricing Order.

In addition, PoM has committed to a range of measures that respond to matters that were raised by the ESC which were considered sustained but not significant.

[6] The ESC's final report is available on its website: Inquiry into Port of Melbourne compliance with the pricing order 2021 | Essential Services Commission
[7] The Undertaking is available on our website: Regulatory Process | Port of Melbourne

Stakeholder engagement

The Undertaking commits PoM to provide a draft engagement protocol covering PoM's approach to consulting on regulatory matters under the Pricing Order to the Minister for Ports and Freight within 3 months of the Undertaking being signed (i.e. by 20 August 2020). The required content of the Pricing Order Engagement Protocol includes matters such as:

- PoM's commitment to ensure a reasonable opportunity for Port User engagement on matters arising under the Pricing Order;
- How PoM will have regard to Port User feedback in decision making relevant to the Pricing Order; and
- The steps of engagement PoM will undertake, including identifying Port User engagement needs, provision of information and approach to receiving and having regard to feedback.

Consultation for the 2022-23 TCS commenced in October 2021, which has meant the planning and delivery of the consultation program was undertaken in parallel with the finalisation and public release of the ESC's inquiry report and the development of the Undertaking. Nevertheless, the approach taken to the consultation program was responsive to the ESC's observations and consistent with the commitments in the Undertaking.

Return on capital

For the WACC estimate for the 2022-23 Regulatory Period, we obtained independent expert advice from HoustonKemp. Under the terms of this engagement, HoustonKemp was required to be objective, professional and to form an independent view on the estimate of the WACC.

HoustonKemp estimated a WACC of 8.99% (pre-tax nominal) for the 2022-23 Regulatory Period. We have adopted HoustonKemp's WACC estimate for the 2022-23 Regulatory Period on the basis that it is consistent with the Pricing Order and the Undertaking.

The WACC estimated by HoustonKemp is 76 basis points (bp) higher than the WACC estimate from PoM's 2021-22 TCS, which was 8.23% (pre-tax nominal). The difference between the two WACC estimates is primarily due to the 87 bp increase in the risk free rate from 1.70% in 2021-22 to 2.57% in 2022-23.

HoustonKemp has advised that under a scenario where the risk free rate had not changed (i.e. adopting the 2021-22 risk free rate of 1.70%, but updating other market-driven parameters), the WACC estimate would be 8.26% (pre-tax nominal), 3 bp higher than the 2021-22 WACC.

Other matters

Table 2 below summarises PoM's responses to the other compliance issues raised by the ESC, which were sustained but not significant.

Table 2 Summary of responses to ESC findings of sustained but not significant non-compliance

Issue raised	PoM response
Operating expenditure	We have taken a number of actions to adjust our approach to forecasting operating expenditure to address the issues raised by the ESC, including: ▪ Reviewing forecast accuracy, considering the reasons for variations between forecasts and actuals, and implementing improvements to the methodology, such as the use of independent expert forecasts for wages and construction costs and providing more detail on the key drivers of costs; and ▪ Reviewing and improving the forecasting methodology by augmenting the forecasting approach with a 'base-step-trend' calculation, including an appropriate efficiency factor, to ensure our forecasts are prudent and efficient.

Issue raised	PoM response
Cost allocation	We have corrected the cost allocation issues raised by the ESC and made changes to the Regulatory Model in relation to road and rail cost allocation to address the findings. We have also taken steps to improve our cost allocation processes and developed an internal process for annual reviews of cost allocation to ensure future compliance.
Prescribed Services Tariffs	We have amended the approach to the calculation of the Weighted Average Tariff Increase (WATI) to ensure consistency with the definition in the Pricing Order. That is, the WATI is based on historical revenues from the most recent financial year for which audited revenue is available.[8]
Content of the TCS	In addition to the above improvements, this TCS contains enhanced documentation for compliance demonstration including: ▪ Additional detail on operating expenditure forecasting and cost drivers; and ▪ Additional detail on capital projects, including service outcomes from projects.

Length of the regulatory period

Under the Pricing Order, PoM is able to determine the length of the regulatory period, which is the period of time over which to apply the Pricing Principles and Cost Allocation Principles.

PoM has chosen to adopt a one year regulatory period for 2022-23. We consider that this approach is appropriate because:

- We considered that there was insufficient time between the finalisation of the ESC's inquiry (released 28 January 2022) and the due date for the TCS submission (31 May 2022) to both address the ESC's findings and consult on and implement a longer regulatory period; and
- Adopting a longer regulatory period would require longer lead times for consultation, which would have overlapped with the ESC's inquiry if we were to adopt a longer regulatory period from 2022-23.

In its final report, the ESC encouraged PoM to consider adopting a longer regulatory period, as it would promote stability and predictability of prescribed service tariffs for Port Users within the applicable tariff limit.[9]

In our 2022 Industry Consultation, as in prior years, stakeholders did not express a strong preference concerning the length of the regulatory period. Nevertheless, PoM is committed to moving to a longer regulatory period from 2023-24.

Following the submission of this TCS, we will consider options for transitioning to a multi-year regulatory period and engage with the ESC and other stakeholders on these options and implementation issues, such as how to meet the Pricing Order compliance requirements for TCS submissions within a multi-year regulatory period.

[8] Pricing Order, Clause 14

[9] ESC, *Inquiry into the Port of Melbourne compliance with the pricing order – final report*, January 2022, p. 34

1 About this 2022-23 TCS

1.1 Purpose

PoM is required to submit an annual TCS to the ESC by no later than 31 May each year[10] that demonstrates how its tariffs for Prescribed Services for the upcoming financial year comply with the Pricing Order. Prescribed Services include the provision of channels, berths, short-term storage and access to wharves, roads and rail. The leasing of space and facilities on Port land are classified as non-Prescribed Services. These non-Prescribed Services are not subject to the Pricing Order with our associated charges based on commercial agreements. Non-Prescribed Services are not covered by this TCS.[11]

Clause 7.1.2 of the Pricing Order provides that the TCS must:

- Set out our tariffs for the forthcoming financial year;
- Detail the basis of any adjustments to tariffs (i.e. re-balancing), including any new or discontinued tariffs, including the cost building blocks that have been applied and the basis on which the rate of return has been estimated;
- Provide information on contracts with Port Users;
- Describe how we have consulted with, and had regard to feedback from, Port Users;
- Explain how our tariffs for 2021-22 comply with the Pricing Order, including the Pricing Principles and Cost Allocation Principles;
- Contain any further supporting information determined by the ESC, in accordance with clause 9 of the Pricing Order; and
- Comply with the information requirements in clause 8 of the Pricing Order.

Appendix S is a compliance checklist that cross-references where in this TCS the requirements of clause 7 have been addressed.

1.2 Structure

This document is structured as follows:

- Chapter 2 explains the regulatory context to this TCS;
- Chapter 3 summarises our stakeholder engagement and how we have had regard to comments from Port Users and stakeholders;
- Chapter 4 sets out our approach to forecasting prudent and efficient capital expenditure, including the service outcomes from projects;
- Chapter 5 sets out our approach to forecasting prudent and efficient operating expenditure;
- Chapter 6 provides a summary of our demand forecast for the next regulatory period;
- Chapter 8 sets out the rate of return on capital;
- Chapter 9 compares the ARR calculated under the ABBM with Prescribed Services revenue (subject to the TAL);
- Chapter 10 describes how our 2022-23 Prescribed Services tariffs comply with the Pricing Order; and
- Chapter 11 describes our alternative depreciation methodology and impacts on Port Users.

There are also a number of appendices (A to R) that support, and form part of, our 2022-23 TCS.

The ESC has not issued a Supporting Information Determination under clause 9 of the Pricing Order and has therefore not specified the form and content of information to be provided in this TCS, or in any of the prior TCSs since the Pricing Order was established.

[10] Under clause 7.1.1(a) of the Pricing Order

[11] The ESC undertakes periodic reviews of our rental agreements with Port tenants in accordance with section 53 of the *Port Management Act (Victoria) 1995*.

1.3 Financial information and use of terminology

This document contains the following financial information:

- 2016-17 to 2020-21 – actual values;
- 2021-22 – forecast values that were submitted in our 2020-21 TCS. These forecast values have not been updated, unless otherwise specified; and
- 2022-23 – forecast values.

All financial information provided in this TCS is denominated in nominal dollars (referred to as "current price terms" in clause 8.1.1 of the Pricing Order), unless otherwise stated. The numbers in the tables may not sum due to rounding. All clause references are to the Pricing Order, unless otherwise stated. Capitalised terms that are not otherwise defined have the meaning given in the Pricing Order.

In this document:

- 'Prescribed Services revenue (subject to the TAL)' means revenue from Prescribed Services in our Reference Tariff Schedule (RTS). It does not include revenue associated with contracts for Prescribed Services; and
- 'ARR' means the Aggregate Revenue Requirement calculated using the ABBM. The initial 2016 capital base included the assets associated with legacy contracts for Prescribed Services that were in place at the time of Port Lease Transaction (PLT). The ARR is therefore inclusive of revenue associated with these legacy contracts.

We have added Prescribed Services revenue associated with the legacy contracts to "Prescribed Services revenue (subject to the TAL)" for the purposes of comparing it with the ARR. We have agreed to this treatment of legacy contracts with the ESC.

We have also agreed with the ESC that the costs and revenues of all new Prescribed Services contracts entered into after the PLT should be excluded from the WATI calculation and all comparisons of revenue streams, albeit that we are fully disclosing the revenue earned under these Prescribed Services contracts in Appendix O.

We are only submitting data for the regulatory year 2022-23. Future calculations beyond 2022-23, and any modelling input assumptions (e.g. CPI in future years), are included for illustrative purposes only.

2 Regulatory context

2.1 Our regulatory framework and investment obligations

PoM's regulatory framework and investment obligations are primarily contained in:

- The stewardship and development obligations in the Port Lease; and
- The regulatory and pricing controls in the Pricing Order.

A brief summary of our stewardship obligations under the Port Lease and regulatory controls under the Pricing Order is provided below.

Stewardship obligations

PoM's **stewardship obligations** under the Port Lease require PoM to:

- Manage, operate and maintain the Port in accordance with Good Operating Practice[12];
- Ensure the Port is capable of providing access to shipping, including being able to reasonably accommodate changing vessel sizes; [13]
- Develop the Port land and infrastructure to:
  - Cater for actual and reasonably anticipated growth;
  - Provide quality and efficiency standards expected of a major port; and
  - Maintain the Port's leading position among major Australian ports in terms of its quality, efficiency and effectiveness.[14]

Pricing Order

The **Pricing Order** is a regulatory instrument issued by the Governor in Council under section 49A of the Port Management Act 1995 (PMA) to regulate the setting of tariffs for Prescribed Services.[15]

The Pricing Order came into effect on 1 July 2016 and regulates the setting of tariffs for Prescribed Services, which relate to the provision of services by investing in wharves, berths and channels for shipping. The Pricing Order was amended in May 2020 to adjust prices and deem prudent certain expenditure in relation to the Port Rail Transformation Agreement (PRTA).

The Pricing Order defines a 'Pricing Order transition period' which runs until 2032, or latest 2037.[16] During the Pricing Order transition period a price smoothing mechanism limits the tariffs to the lesser of two binding constraints:

- The Tariffs Adjustment Limit (TAL), which limits weighted annual tariff increases to inflation (CPI)[17]; or
- To recover no more than PoM's prudent and efficient costs, determined by application of an accrual building block methodology.[18]

The Pricing Order also requires that any operating and capital costs we incur and recover from Port Users through prices are prudent and efficient.[19]

---

[12] Where 'Good Operating Practice' means: adherence to a standard of practice which includes the exercise of that degree of skill, diligence, due care, prudence and foresight which would reasonably be expected of a reasonably experienced, competent, prudent and qualified operator of the Port; and provision of appropriate services and facilities for the ease of access to, expeditious and safe movement in and efficient use of the concession area and port infrastructure by vessels, vehicles and other users of the Port.

[13] Port Lease, clause 8.2 and 8.4

[14] Port Lease, clause 26

[15] The Port Management Act, Pricing Order and May 2020 amendment to the Pricing Order are available on our website here Regulatory Quick Links | Port of Melbourne

[16] Pricing Order clause 3.4

[17] Pricing Order clause 3.1

[18] Pricing Order clause 2.1.1

[19] Pricing Order clause 4.1.1 and 4.2.1

2.2 ESC Pricing Order compliance inquiry

On 28 January 2022, the ESC published its final report on its first inquiry into PoM's compliance with the Pricing Order for the five-year period from 1 July 2016 to 30 June 2021 (the review period).[20]

The key findings of the ESC were as follows:

- The ESC made a finding of significant and sustained non-compliance in relation to the rate of return (and therefore aggregate revenue requirement), and with respect to consultation with Port Users;
- The ESC found sustained non-compliance in relation to PoM's operating expenditure forecasts, cost allocation, tariffs, and the content of Tariff Compliance Statements; and
- The ESC found PoM was compliant in relation to its capital expenditure, depreciation (including the deferral of depreciation) and demand forecasting.

There were no price impacts on Port Users during the review period as a result of the findings of non-compliance.

2.3 PoM's response to the inquiry

The Victorian Government has accepted an Undertaking prepared by PoM in response to the ESC Inquiry. The Undertaking and associated response outlines actions PoM will take to remedy the non-compliance identified by the ESC and our commitment to ensure compliance going forward.

The Undertaking has been accepted by the ESC Minister as appropriate to adequately address PoM's non-compliance. The undertaking is legally binding until 30 June 2027, in line with the ESC's next review. PoM considers that the Undertaking will provide the appropriate degree of certainty to PoM and to Port Users for the next five years until the ESC completes its next review of PoM's compliance with the Pricing Order.

The Undertaking responds to matters on which the ESC found significant and sustained non-compliance by PoM. The undertaking:

- Commits to the approaches that will be applied by PoM to calculate the Weighted Average Cost of Capital (WACC), which addresses the ESC's findings on return on capital and ARR. Chapter 8 of this TCS provides further detail on our approach to the WACC; and
- Outlines PoM's commitment to develop and publish a Pricing Order Engagement Protocol which will, among other internal process initiatives, improve PoM's engagement practices under the Pricing Order. Chapter 3 of this TCS provides further detail on our approach to stakeholder engagement.

In addition, PoM has implemented a range of measures that respond to matters that were raised by the ESC which were considered sustained but not significant. These measures are described in detail in this TCS, as follows:

- Adjustments to our opex forecasting approach to address the ESC's observations are described in Chapter 5;
- Corrections to our cost allocation approach that address the ESC's findings are described in Chapter 6; and
- Our amendment to the approach to calculating the WATI to ensure consistency with the definition in the Pricing Order is described in Chapter 10.

The Undertaking and a summary of other measures taken by PoM to respond to the ESC's findings can be found in the Public Summary of the PoM Response to the ESC Review Findings, available on the PoM website.

[20] The ESC's final report is available on its website: Inquiry into Port of Melbourne compliance with the pricing order 2021 | Essential Services Commission

2.4 Length of the regulatory period

Background

Under the Pricing Order, PoM is able to determine the length of the regulatory period, which is the period of time over which to apply the Pricing Principles and Cost Allocation Principles. The Pricing Order also confirms that PoM may adopt regulatory periods of different lengths over the term of the Port Lease.[21]

Over the past five years, PoM has chosen to adopt a one year regulatory period because:

- Key longer term plans (such as the Port Development Strategy) were yet to be finalised; and
- The operation of the TAL means the typical benefits of longer regulatory periods (price stability and incentives for efficient investment) are already present.

In the 2021-22 TCS, we noted that we intend to adopt a longer regulatory period in the future, and identified a number of transitional issues that we are seeking to resolve in this process. [22]

In the final report of its 5-year Inquiry into compliance with the Pricing Order, the ESC encouraged PoM to consider adopting a longer regulatory period, as it would promote stability and predictability of prescribed service tariffs for Port Users within the applicable tariff limit.[23] The ESC also considered a longer regulatory period, such as a five-year period would be in the best interest of Port Users and Victorian consumers compared to a one-year period.[24]

What we heard and how we have had regard to comments

In our 2022 Industry Consultation, we:

- Informed Port Users and other stakeholders that we will be adopting a 1-year regulatory period for the 2022-23 year, and that we aim to transition to a longer regulatory for the regulatory year beginning 1 July 2023; and
- Consulted stakeholders on their preferences for PoM's regulatory period length and the timing of the transition, including how they would like to be consulted on implementation issues.

Four submissions addressed the length of regulatory period, with only one (IFCBAA) expressing a clear preference for a longer regulatory period. VICT and DP World related the length of the regulatory period to incentives for investment (in particular noting regulatory period length should support prudency and efficiency, rather than hinder it). Most stakeholders expressed an interest in continuing to be informed about regulatory period length.

We also note that in previous engagement, stakeholders indicated that we should consider principles of stability, transparency and consistency in choosing the length of future regulatory periods.[25]

Further details of our consultation with stakeholders on the length of the regulatory period are set out in Chapter 3.

PoM has chosen to adopt a one year regulatory period for 2022-23. We consider that this approach is appropriate because:

- We considered that there was insufficient time between the finalisation of the ESC's inquiry (released 28 January 2022) and the due date for the TCS submission (31 May 2022) to both address the ESC's findings and consult on and implement a longer regulatory period; and

[21] Pricing Order Clause 13
[22] See 2021-22 TCS General Statement, pp.21-22, available on the PoM website: https://www.portofmelbourne.com/regulatory-information/regulatory-quick-links/
[23] Inquiry into the Port of Melbourne compliance with the pricing order – final report, p. 34
[24] Inquiry into the Port of Melbourne compliance with the pricing order – final report, p. 35
[25] See 2021-22 TCS General Statement, pp.22-23, available on the PoM website: https://www.portofmelbourne.com/regulatory-information/regulatory-quick-links/

- Adopting a longer regulatory period would require longer lead times for consultation, which would have overlapped with the ESC's inquiry if we were to adopt a longer regulatory period from 2022-23.

PoM is committed to moving to a longer regulatory period from 2023-24.

The feedback received during our 2022 Industry Consultation will assist us in designing our approach to consulting on the planned transition to a longer regulatory period in the latter part of 2022. The next steps in this process will involve:

- Internal options analysis and identification of a preferred option (or options);
- Engagement with the ESC on our preferred option (or options) and implementation issues; and
- Further, broad stakeholder engagement to keep stakeholders informed about regulatory period length and seek their views on matters that could have a significant impact on them.

Transition issues

In deciding how and when to transition to a longer regulatory period, there are a number of issues about how the regulatory framework would operate (Table 3). Unlike the regulatory frameworks for other regulated infrastructure, neither the Pricing Order nor the ESC's Statement of Regulatory Approach provide guidance on how these matters are to be dealt with. We will seek to engage with the ESC, Government and Port Users on achieving clarity on these matters.

Table 3 Considerations for transitioning to a longer regulatory period

Consideration	Discussion
Certainty over future price outcomes	Regardless of the length of the regulatory period, Port Users have certainty that weighted prescribed prices will not increase by more than CPI out until 2037, due to the operation of the TAL. The regulatory period length during the TAL period cannot affect pricing stability. Further, the TAL gives Port Users, Victorian consumers and other stakeholders certainty that our Prescribed Services tariffs, on average, will not increase by more than inflation over the next 15 years. That is a much longer period than the certainty offered to customers in most other regulated industries, where customers typically get 4-5 years of price certainty under price cap regimes. After the TAL period, adopting a longer regulatory period will provide Port Users with certainty over the projected ARR and can allow prices to be smoothed over that period.
Incentives to outperform expenditure and demand forecasts	The TAL currently means our revenues are not being set by the ABBM, but by annual escalation of weighted prescribed service tariffs by CPI. Under this framework, we have strong incentives to: ▪ Continue to seek out efficiencies in opex and capex regardless of the length of the regulatory period, due to the disconnect between the ABBM revenues and the binding TAL price cap; and ▪ Continue to grow trade and port demand regardless of the length of the regulatory period because the TAL is a price cap and not a revenue cap. During the TAL period, the regulatory period length has virtually no impact on incentives for achieving efficiencies in expenditure or the incentive to grow trade. However, after the TAL period, when prices can adjust to reflect efficient costs, fixing the building block inputs for longer periods at a time could potentially enhance incentives for achieving efficiencies in expenditure and growing trade. However, the operation of these incentives is dependent on how the building block inputs are treated annually during the regulatory period – this issue is not addressed by the Pricing Order or the Statement of Regulatory Approach.
Administrative burden	Preparing TCS submissions each year imposes an administrative burden on PoM and stakeholders that we engage with. Longer regulatory periods may reduce this burden if it means that information requirements reduce in years within a regulatory period, and peak for TCS submissions leading up to such a period (e.g., every 5 years). However, the extent of any reduction in administrative burden is not clear given PoM must submit a TCS each year of the Port Lease period regardless of the regulatory period length. We intend to engage further with stakeholders on how the period length should affect the TCS information requirements, including as to:

Consideration	Discussion
	▪ What updates to the ARR inputs and calculations are needed within a regulatory period (e.g., expenditure, demand, depreciation, and cost of capital); and ▪ What this means for stakeholder engagement.
Changes to operating environment	A short regulatory period (e.g., 1 year) means that changes to the PoM's operating environment can be readily reflected in the ARR. A longer period can mean that such changes only get picked up when the period is reset (e.g., every 5 years). Regulatory frameworks applying to other regulated infrastructure typically involve mechanisms that allow for efficient sharing of risks or update for changes in the operating environment. These mechanisms are commonly specified in a price control mechanism and formula and include: ▪ Pass-through of unforeseen and material cost changes (positive or negative); ▪ Adjustment for contingent projects that have been triggered by a pre-specified event; ▪ Automatic updates for changes in the cost of debt or other cost pass-through (such as government levies); and ▪ Updates for differences between allowed and actual revenues via an 'unders and overs' account. While the Pricing Order specifies the TAL formula, there is no equivalent specification of the form of price control for when the TAL is not the binding constraint on PoM's price setting.
Alignment to the ESC's five-yearly compliance reviews	The regulatory period length could be aligned to the ESC's five-year compliance reviews. For instance, the regulatory period could be staggered so that it started one or two years after the start of the five-year compliance review period. This would allow PoM to consider and engage on the ESC's findings from its most recent five-year review well in advance of the next regulatory period, including to re-open or amend prices and other regulatory settings.

3 Stakeholder engagement

3.1 Context and overview

This section:

- Provides an overview of PoM's engagement activities that have informed this 2022-23 TCS, a summary of the issues raised and feedback provided by Port Users and other stakeholders, and how we have had regard to the comments provided by Port Users and other stakeholders; and
- Explains how we have responded to the ESC's 5-year inquiry compliance findings regarding stakeholder engagement.

3.1.1 Pricing Order requirements

The Pricing Order sets out the following requirements for stakeholder engagement:

> *7.1.2(d) The Tariff Compliance Statement must… set out the process by which the Port Licence Holder has effectively consulted and had regard to the comments provided by Port Users.*

3.1.2 Overview of engagement for the 2022-23 TCS

Our engagement leading up to the 2022-23 included:

- 2022 Industry Consultation – formal engagement to address specific issues for decisions to be made for the 2022-23 TCS and beyond (see section 3.2);
- Engagement on projects progressing in 2022-23 – to inform PoM's delivery of projects under the PDS (see section 4.6); and
- Ongoing commercial and industry information exchange (described below).

2022 Industry Consultation

The 2022 Industry Consultation program for the 2022-23 TCS comprised two rounds:

- Round 1: Early engagement – Initial conversations with stakeholders to inform the topics and approach to engagement; and
- Round 2: Industry Consultation – Broad engagement on the TCS Consultation Paper (with a mix of individual meetings, online forums and written submissions).

The planning and delivery of the 2022 Industry Consultation program was undertaken in parallel with the finalisation and public release of the ESC's inquiry report the development of the Undertaking. Nevertheless, the approach taken to the consultation program was responsive to the ESC's observations and consistent with the commitments in the Undertaking. PoM is committed to giving close consideration to the views of all parties, consistent with the efficient future development of the port.

Engagement on projects progressing in 2022-23

During 2021-22, PoM undertook project-specific engagement on the following projects in progressing in 2022-23:

- Swanson Dock West Remediation;
- Port Rail Transformation project; and
- Webb Dock East Berth Extension.

Further details on this engagement are set out in section 4.6.

No major growth projects are commencing in 2022-23. However, we consulted stakeholders and Port Users on their preferences on how we engage on our capital planning and port development and will actively take their feedback into account when designing our approach to engagement on port development, which we plan to review and refresh this year.

Ongoing commercial and industry information exchange

We undertake in a range of engagement activity as part of the ongoing commercial and industry information exchange required for good operating practice. In the 12-month lead-up to the 2022-23 TCS these activities have included:

- **Bi-monthly Industry Update** – electronic newsletters commenced in January 2022, which provide information about PDS projects, supply chain issues and broader port information, including key PoM contact details for stakeholders to raise any feedback or follow-up questions;[26]
- **Monthly Trade Reports**, which provide information on container terminal productivity (port-wide), container trade, non-containerised trade, and top commodities;[27]
- Freight Victoria's **Voluntary Performance Modelling Framework (VPMF)** quarterly dashboard commenced in 2021-22, for which PoM provides Freight Victoria with data on the load-discharge ratio. The load-discharge ratio is the ratio of total exports to total imports (full and empty), which shows whether trade is generating or removing surplus empty containers at the port. Reporting on the load discharge ratio commenced in Q2, 2021;[28]
- **Annual Industry Consultation Summary** – commenced in 2021-22, covering what and how we engaged, what matters we heard and next steps, and providing key PoM contact details for stakeholders to raise any feedback or follow-up questions;[29] and
- **Regional relationship managers** in the Riverina and Tasmania, who work with Port Users (in particular, exporters) to solicit feedback, keep them abreast of issues at the port, and help address supply chain issues.

3.1.3 ESC Inquiry into PoM's compliance and PoM's response

In its first inquiry into PoM's compliance with the Pricing Order, the ESC made a finding of significant and sustained non-compliance in relation to PoM's compliance with clause 7.1.2(d). The ESC's view was that PoM had not demonstrated it effectively consulted or had adequate regard to Port Users' comments in its 2020-21 and 2021-22 TCS. [30]

We recognise the importance of consultation and the broad stakeholder interests in the port's operations. Over the first five years of the Port Lease we have undertaken extensive consultation and improved our processes each year, adjusting our approaches in response to feedback from the ESC and stakeholders and we are committed to addressing the findings of the ESC's inquiry report.

We have addressed the ESC's findings on engagement via:

- An enforceable Undertaking that addresses the ESC's findings of significant and sustained non-compliance. In relation to stakeholder consultation, the Undertaking outlines PoM's commitment to develop and publish a Pricing Order Engagement Protocol in the coming months which will, amongst other general internal process initiatives, improve PoM's engagement practices under the Pricing Order[31]; and
- Further refinement of our annual engagement on the TCS under the 2022 Industry Consultation program, including extending the timeframe for engagement, preparing a detailed Consultation Paper and undertaking a post-engagement review (see section 3.3).

[26] Bi-monthly Industry Update newsletters are available on the PoM website: Port News | Port of Melbourne
[27] Monthly Trade Reports are available on the PoM website: Trade & Statistics | About Us | Port of Melbourne
[28] The VPMF dashboards are available on the Department of Transport website: Voluntary Performance Monitoring Framework | Department of Transport
[29] Our 2021-22 Industry Consultation Summary is available on our website: Industry Consultation 2021 - Port of Melbourne
[30] ESC, *Inquiry into the Port of Melbourne compliance with the Pricing Order: Final Report,* 31 December 2021, p.112
[31] The Undertaking is available on our website: Regulatory Process | Port of Melbourne

The Undertaking commits PoM to provide a draft engagement protocol to the Minister for Ports and Freight within 3 months covering PoM's approach to consulting on matters under the Pricing Order. The required content of the Pricing Order Engagement Protocol is set out in Box 1, below. PoM will take into account feedback provided by the Minister for Ports and Freight and publish a final Pricing Order Engagement Protocol after feedback is received.

Box 1: Undertaking – Pricing Order Engagement Protocol[32]

The Pricing Order Engagement Protocol will set out the process by which PoM effectively consults with and has regard to comments provided by Port Users and will:

- describe PoM's commitment to ensure a reasonable opportunity for Port User engagement on matters arising under the Pricing Order;
- set out the way in which PoM will have regard to Port User feedback in decision making relevant to the Pricing Order;
- outline the steps of engagement PoM will undertake, which may include (but which will not be limited to) how PoM will:
  - identify Port User engagement needs tailored to suit the topic on which it seeks to engage;
  - determine the appropriate engagement approach taking into account how it will identify priority matters relevant to the Pricing Order that might have a significant impact on Port Users;
  - plan engagement activities including the preparation of materials for engagement to provide appropriate information outlining the purpose, form and content of engagement so that Port Users can provide informed and meaningful feedback;
  - provide a reasonable time period for engagement to ensure Port Users are given a reasonable opportunity to participate taking account of their engagement requirements;
  - encourage Port Users to provide written feedback, and allow alternative means of providing feedback;
  - use feedback obtained during engagement activities to inform decision making and ensure PoM has had regard to Port User feedback;
  - provide for complaints on engagement matters to be directed to PoM in the first instance; and
  - keep Government informed about any material feedback and how that feedback is to be addressed.

3.2 2022 Industry Consultation

3.2.1 Overview

The 2022 Industry Consultation was designed to enable PoM to effectively engage with Port Users on issues of importance to them for the 2022-23 TCS, as required by the Pricing Order.[33] In addition to the requirements of the Pricing Order, in developing the engagement program, we had regard to:

- Issues raised by stakeholders and the ESC during prior engagement, the ESC five year review, and past ESC interim commentaries;
- Regulatory engagement requirements outlined in the ESC's Statement of Regulatory Approach and further detailed in the five year review information request;
- Findings from the 2021 RPS review of TCS engagement (included in our 2021-22 TCS) and the 2020 URA review of Tariff Rebalancing engagement (included in our 2020 Tariff Rebalancing Application);

[32] The Undertaking is available on our website: [Regulatory Process | Port of Melbourne]

[33] Pricing Order, Clause 7.1.2(d)

- Practices and approaches used by regulated entities in other sectors;
- Feedback received in Round 1 of the engagement undertaken in late 2021 and early 2022; and
- Findings on engagement in the ESC's final report (noting that these findings were not released until 28 January 2022).

Table 4 below provides the timeline for the consultation, and brief summaries of the two rounds of engagement follow.

Table 4 2022 Industry Consultation timeline

Activity	Timing	Approach and outcomes
Round 1 of engagement program		
Early engagement to inform approach to 2022 Industry Consultation	October 2021 to January 2022	Targeted engagement to inform topics for engagement in the 2022 Industry Consultation. 12 one-on-one discussions held with stakeholders from across the supply chain.
Round 2 of engagement program		
Launch of 2022 Industry Consultation period	10 March 2022	Launched 2022 Industry Consultation website and notification via direct email and social media to invite stakeholders to participate via: ▪ Making a written submission ▪ Attending an online engagement forum ▪ Requesting a one-on-one meeting with the PoM team.
Consultation Paper	10 March 2022	Published a Consultation Paper on 10 March 2022 to kick off formal consultation process.
One-on-one meetings with the PoM team	11 March 2022 to 8 April 2022	Nine stakeholders requested a one-on-one meeting with PoM.
Open online forums	22 March 2022 25 March 2022	51 stakeholders attended the online forums. Presentation materials were uploaded to the 2022 Industry Consultation website following the forums.
Written submissions to the Consultation Paper	Due 8 April 2022	We received 8 written submissions.
Post engagement review	3 May 2022 to 11 May 2022	PoM engaged GHD to conduct a post engagement review, including a survey of participants. GHD's engagement survey was sent to 64 participants (who participated in a forum, a one-one-one meeting, or made a submission), with 20 surveys completed.

Round 1 – Early engagement

In late 2021 and early 2022, PoM held discussions with key stakeholders (being those with a demonstrated interest in previous and recent engagement, ESC processes, or who were otherwise identified through internal discussions with PoM SMEs) to inform key issues for the 2022 Industry Consultation program. PoM held 12 discussions over the course of October, November, and January with a range of stakeholders from across the supply chain including representatives of the following stakeholder groups:

- Peak bodies for shipping, landside transport and cargo owners;
- Shipping lines;
- ICT operators; and

- Government.

Round 2 – 2022 Industry Consultation

Round 2 of the 2022 Industry Consultation kicked off with the launch of the 2022 Industry Consultation page on our website and release of a Consultation Paper. The Consultation Paper is available on our website and provided as Appendix E to this TCS.

The purpose of the Consultation Paper was to provide stakeholders with appropriate information about issues PoM was considering in the lead up to submission of the 2022-23 TCS and the consequences of those issues, so that stakeholders could be consulted effectively.

The topics covered in the Consultation Paper were informed by what PoM heard from stakeholders in previous engagement on what issues are most important to them[34], our own identification of issues that could have a significant influence on service and/or prices for Prescribed Services, and feedback from the ESC.

Topics covered in the Consultation Paper were designed to assist us to:

- Inform stakeholders about PoM's regulatory and investment obligations, and provide an update on the ESC's final report;
- Consult stakeholders on our approach to engagement on port development;
- Consult stakeholders on our plans for publishing port performance data and metrics;
- Inform stakeholders about prices for the next financial year and consult them about preferences for tariff reform; and
- Consult stakeholders on depreciation and the length of the regulatory period.

The engagement topics and questions in the Consultation Paper used to assist stakeholders in providing feedback covered the following areas:

- Approach to the 2022 Industry Consultation program;
- Engagement on Port development;
- Preferences for publication of performance data and metrics;
- Tariff reform for future consideration;
- Treatment of deferred depreciation; and
- Length of regulatory period.

For each topic, the Consultation Paper described the purpose and scope of the engagement, set out detailed information so stakeholders could participate effectively, and identified how PoM would use the feedback provided.

3.2.2 What we heard and how we have had regard to comments

The table below provides a summary of the comments received in written submissions and how we have had regard to those comments, including where we have made decisions in this TCS on the topics and where further engagement is proposed.

A more detailed summary of stakeholder comments and PoM's consideration of the comments is provided in Appendix G to this TCS.

PoM will directly notify all participants in the online forums, those who attended one-on-one meetings, and those that made written submissions about the release of this TCS. We will also provide individual responses to parties that made written submissions.

All submissions provided to PoM have been provided to the ESC.

[34] For example, in our 2021 Industry Consultation and targeted engagement with stakeholders from across the supply chain in late 2021 and early 2022 to inform topics for engagement in the 2022 Industry Consultation

Table 5 Summary of submissions to the 2022 Industry Consultation and how PoM has had regard to comments

Topic and stakeholder comments	How we have had regard to comments
Feedback on 2022 Industry Consultation Program	
International Forwarders & Customs Brokers Association of Australia Ltd. (IFCBAA), ANL and VICT provided positive feedback on the consultation program, including on: ▪ Level of information provided; and ▪ Opportunity to engage, and channels of engagement. Key criticisms on the program (from Patrick and DP World) included: ▪ Suggesting PoM publish a statement outlining its approach to future consultation; ▪ Having insufficient time and opportunity to engage on certain issues, including port development and performance metrics; ▪ The scope of consultation going beyond TCS matters; and ▪ The process being overly influenced by the priorities and interests of shipping lines.	PoM will have regard to the feedback provided when planning and undertaking future engagement activity, including: ▪ Engagement on the next TCS; and ▪ Engagement on port development. We will continue to provide materials in advance and offer a variety of channels to participate. The Pricing Order Engagement Protocol will provide an opportunity to address issues including a framework for engagement and clarifying the scope of engagement on TCS-related matters versus broader engagement. As set out below, based on comments received we have decided to consult further on performance metrics, providing additional time and opportunity to hear stakeholders' views on this topic. In relation to port development, as set out in the Consultation Paper, the purpose of engagement was to consult stakeholders about our approach to engagement on port development. We will use feedback from stakeholders to design our engagement strategy and approach for port development in the coming months, with the expectation that we will commence engagement with Port Users and other stakeholders in mid-2022. This process will provide stakeholders further opportunities to provide their views on this topic. PoM regularly consults with a diverse group of stakeholders including Port Users and is aware that each stakeholder has its own interests and commercial incentives that must be balanced by PoM in making decisions consistent with its obligations under the Port Lease and Pricing Order.
Engagement on Port Development	
Submissions provided detailed feedback on the matters that they consider should be included in future engagement on port development, including: ▪ Current and forecast port capacity; ▪ Actual and forecast container demand; ▪ Vessel fleet forecasts; ▪ Global developments such as the IMO requirements; ▪ Port User development plans; and ▪ Details of future capital plans, the various capex and opex options and alternatives that have been considered and their costs.	As set out in the Consultation Paper, this topic does not relate to a specific decision on any particular capital project for the 2022-23 TCS, but rather was designed to get feedback from stakeholders on our approach to future engagement on port development. PoM will have regard to the feedback provided when planning and undertaking engagement on port development, with the next step in this process expected to involve engagement on key inputs later in 2022. We agree in principle with stakeholders' suggestions on the matters to be included in our engagement on port development. Much of the feedback provided by stakeholders concerning matters that they would like to see included in engagement is consistent with our early thinking on the approach to engaging on the Port Capacity Enhancement Program (e.g. forecasts of demand, vessel

Topic and stakeholder comments	How we have had regard to comments
Most stakeholders provided positive feedback on the PDS Delivery Program, however Patrick and DP World commented that they considered it to be too high-level. Several stakeholders suggested that the PDS Delivery Program should be updated and shared with stakeholders upon changes to projects (or more frequently). The MUA proposed that PoM should work with stakeholders to develop a workforce impact statement for new investments.	sizes and capacity), and stakeholders will have further opportunities to influence the topics engaged on through this process. We will also seek views from Port Users about their development plans when developing our investment plans. Having regard to stakeholder feedback on updates to the PDS Delivery Program, PoM's position is that we should update it at least every 12-18 months, or when there are material changes in the nature and/or timing of key projects.
Performance data and metrics	
Some stakeholders were supportive of the proposed performance data and metrics: ▪ The MUA agreed with the metrics proposed and identified another seven that it considers should be included; and ▪ ANL considered that there is value in publishing the performance data (monthly), with a preference for both terminal and whole of port level. The stevedores all objected to the proposed reporting on performance, for reasons including: ▪ Information on quay line productivity and terminal productivity is already available to shipping lines; ▪ Patrick requested that PoM does not proceed with the inclusion of performance metrics in the 2022-23 TCS but rather separately engages with stakeholders to work through the feedback and also have regard to the recommendations of the Productivity Commission; ▪ DP World stated that the metrics did not provide information about the delivery of PoM's key obligations under its port lease; and ▪ Both Patrick and DP World considered that the data duplicated the work being done by the Productivity Commission.	Having regard to the feedback provided, we are of the view that publishing data on a terminal-specific basis is valuable to Port Users and consistent with PoM's stewardship obligations under the Port Lease. However, we note that there are a range of opposing views on this issue and given the feedback received, we consider that further engagement with stakeholders is required to address issues such as: ▪ The metrics to be included, and how they should be calculated; ▪ The approach to providing context to any performance data that we decide to publish; and ▪ Confidentiality of data (noting that the data in question is collected and maintained by PoM). Therefore, PoM will hold off on publishing the performance data and metrics that stakeholders have raised concerns about (berth utilisation, quay line productivity and terminal productivity) and undertake further engagement with stakeholders on these issues, which we will conduct as part of engagement on port development. Several stakeholders referred to the Productivity Commission's inquiry into Australia's Maritime Logistics System. We will consider the outcomes of the Productivity Commission inquiry to inform our approach, including the implications for whether and how we should publish data. We also note the State's interest in expanding the existing Voluntary Performance Monitoring Framework (which provides transparency on the performance of the landside container supply chain) and will contribute to this process.
Tariffs	
Feedback was received from various stakeholders on tariff reforms: ▪ The IFCBAA stated that imports should not subsidise exports as there is no evidence the price difference promotes trade growth; ▪ ANL encouraged PoM to consider reforms that incentivise the use of rail;	As noted in our Consultation Paper, tariff rebalancing does not form part of this TCS. Following the feedback received during the industry consultation process, and to allow us to focus on engagement on port development and transitioning to a longer regulatory period, we have decided not to progress a rebalancing application in 2022. We will continue to engage with stakeholders about potential tariff reforms for the future, having regard to

<table>
<tr><th>Topic and stakeholder comments</th><th>How we have had regard to comments</th></tr>
<tr><td>Comments from VICT and Patrick included the consideration of prudency and efficiency for capital plans of capital expenditure associated with rebalancing; and
VICT also suggested that a tariff mechanism be developed to allow PoM to be able to invest and continue to recover outside of the current restricted framework.
Patrick also provided feedback on the matters to be addressed in consultation on future rebalancing applications and views on information that Patrick would like to be provided with in any rebalancing application.

The MUA stated PoM has an obligation to consider port user market stability where those operations involve significant labour costs, when considering its pricing.</td><td>both the types of tariff reforms stakeholders have proposed and the information stakeholders would like to see included in engagement on any future tariff rebalancing application.

Should any tariff changes take place there will be an extensive consultation process and notice period as required under the Pricing Order.</td></tr>
<tr><td colspan="2">Treatment of deferred depreciation</td></tr>
<tr><td>Feedback on deferred depreciation included:
The IFCBAA stated Port Users and other stakeholders generally have a preference for a model that minimises price shocks (pursue price stability) in recovering deferred depreciation;
Patrick submitted that it would be helpful if the illustrative profiles could also provide monetary levels for wharfage to give a feel for the likely annual step ups / step downs taking into account cumulative inflation; and
DP World suggested that if the rate of return was reduced to an efficient level, the balance of the depreciation account would be fully recovered by the early-mid 2030s (negating the need to address recovery of deferred depreciation).</td><td>PoM is forecasting to defer some depreciation in the 2022-23 regulatory period, on the basis that the TAL makes some depreciation un-recoverable in the year it is incurred.

Given the feedback received, PoM has decided to maintain its approach of adopting a tilted annuity approach to the recovery of deferred depreciation post the TAL period.

In response to Patrick’s suggestion, we have included forecasts of nominal inward wharfage fees in our illustrative analysis. It is important to note that the level of nominal tariffs 16 years in the future (and beyond) is highly dependent on inflation, so these figures should be considered indicative only (see Chapter 11).

In response to DP World’s comments, as set out in Chapter 8, we consider that the WACC is compliant with the Pricing Order. We also note that:
The compliance of the WACC with the Pricing Order has been addressed in the Undertaking signed by the ESC Minister, which remedies non-compliance during the review period; and
PoM’s capital expenditure, RAB and depreciation were found to be compliant by the ESC in its 5-year review.
On this basis, we do not agree with DP World’s suggestion that depreciation could be fully recovered by the mid-2030s.

Information on the tilt rate and pricing impacts will be updated at the commencement of future regulatory periods.</td></tr>
<tr><td colspan="2">Regulatory period</td></tr>
<tr><td>Four submissions addressed the length of regulatory period, with only one of those</td><td>As set out in the Consultation Paper, PoM will adopt a one-year regulatory period for the 2022-23 TCS. The feedback received as part of this Consultation Paper will assist PoM in designing its approach to consulting on its planned</td></tr>
</table>

Topic and stakeholder comments	How we have had regard to comments
(IFCBAA) expressing a clear preference for a longer regulatory period. VICT and DPWA related the length of the regulatory period to incentives for investment (in particular noting regulatory period length should support prudency and efficiency, rather than hinder it).	transition to a longer regulatory period in the latter part of 2022. The next step in this process is expected to involve options analysis and engagement on a preferred option (or options) with the ESC on implementation issues, including the requirement for further, broad stakeholder engagement.

3.3 Post engagement review

Review and evaluation of the engagement approach and activities is essential to ensure that engagement activities were meaningful to both industry stakeholders and PoM. We have taken a number of steps to review the engagement process to feed into our continuous improvement:

- The Consultation Paper contained several questions on the approach to engagement and effectiveness of the consultation materials;
- We engaged GHD to conduct a post engagement review and provide recommendations on improvements to the process; and
- We prepared a reconciliation of the 2022 Industry Consultation to the requirements for the Pricing Order Engagement Protocol committed to in the Undertaking.

3.3.1 GHD post engagement review

PoM engaged GHD to undertake a follow-up survey, conduct an internal de-brief with the PoM team, and provide insights and recommendations for future improvement. GHD's report is provided as Appendix H to this TCS.

Insights

GHD provided insights according to four key themes that emerged from the internal de-brief and survey, summarised briefly below:

- **Theme 1: Capturing the stakeholder voice**. The results of the survey and internal debrief identified that having a range of collateral for different topics was key to fully understanding the content and being able to interact. It was identified that the content for the consultation was focused on what stakeholders wanted to learn more about, rather than just what PoM felt they needed to report on. However, it was noted in the internal debrief that the lack of a Customer Relationship Management system (CRM) hindered the ability to roll out the notifications of consultation and invitations to one-on-one briefings and forums efficiently; and
- **Theme 2: Port of Melbourne – industry experts**. The presentation from senior experts at the forums was well received. The survey identified that having the right subject matter experts was the most valued element from the industry forums. The 'welcome and update' from the CEO was also an appreciated addition to the forums;
- **Theme 3: Genuine engagement**. The survey and internal debrief both identified that genuine and meaningful engagement was of key importance to stakeholders and the PoM team. The addition of the Consultation Paper was welcomed by the internal team as a mechanism to declutter the presentation slide deck and have more targeted and meaningful conversations in the forums. The one-on-one stakeholder sessions were well received by industry and the use of the Consultation Paper to help discussions flow was also noted; and
- **Theme 4: Engagement process**. Internally it was noted that the use of a project manager to guide the process was critical, which helped to bring the collateral together more quickly. Having a plan and committing to the plan was noted as a positive part of the process.

Recommendations

GHD's recommendations are focused on ensuring a positive annual industry consultation experience based on stakeholder feedback and internal lessons learnt. GHD recommended that PoM:

- Invest in a CRM to maintain a database of stakeholders to minimise the work required to connect with stakeholders;
- Ensure a project manager is identified and empowered to run this process, which GHD suggested start in December;
- Continue to publish a Consultation Paper; and
- Ensure there is a CEO welcome and update at major Industry events.

PoM agrees with GHD's recommendations and will implement them in future engagement activity.

3.3.2 Reconciliation of 2022 Industry Consultation process to Undertaking

Table 6 below provides a reconciliation of the 2022 Industry Consultation to the steps of engagement set out in the Undertaking for the Pricing Order Engagement Protocol.

Table 6 Reconciliation of 2022 Industry Consultation to engagement steps in the Undertaking

Pricing Order Engagement Protocol – steps	Approach in 2022 Industry Consultation
Identify Port User engagement needs tailored to suit the topic on which it seeks to engage.	The form of engagement was based on feedback from our 2021 Industry Consultation, where stakeholders indicated they would like a range of options for engaging with the port, including briefings and face-to-face engagement. Stakeholders were also asked about their preferences in round 1 of the engagement program. We also drew on feedback from the ESC about the level of information available to stakeholders on complex topics (e.g. depreciation).
Determine the appropriate engagement approach taking into account how PoM will identify priority matters relevant to the Pricing Order that might have a significant impact on Port Users	The topics covered in the 2022 Industry Consultation were informed by what PoM heard from stakeholders in previous engagement on what issues are most important to them (in Round 1 engagement and in previous years), our own identification of issues that could have a significant influence on service and/or prices for Prescribed Services, and feedback from the ESC.
Plan engagement activities including the preparation of materials for engagement to provide appropriate information outlining the purpose, form and content of engagement so that Port Users can provide informed and meaningful feedback	Two stakeholder engagement plans were developed, building first on past engagement and then discussions in late 2021 / early 2022 with key stakeholders. The Consultation Paper was designed to provide significantly more detail on the engagement topics than had been provided in previous years, and also explicitly set out: ▪ The content and purpose of the engagement; and ▪ Consultation timeframes and how stakeholders could participate and provide feedback.

Pricing Order Engagement Protocol – steps	Approach in 2022 Industry Consultation
Implement engagement and the determination of a reasonable time period for engagement to ensure Port Users are given a reasonable opportunity to participate taking account of their engagement requirements.	The timeframes for this engagement program were made difficult by the release of the ESC's final report on 28 January 2022, and the need to consider the findings in the context of the engagement plan. Nevertheless, with 4 weeks of engagement for round two, on top of a prior period for round 1 engagement, the timeframes adopted were consistent with previous feedback provided by the industry (where stakeholders have previously requested four weeks to provide feedback) and the ESC's consultation approach (as set out in its Charter of Consultation and Regulatory Practice). Where stakeholders have indicated that they would like more time to consider the issues (for example, on performance metrics and data), we have delayed making a decision and will continue to engage to ensure that there is a reasonable opportunity to participate and stakeholders are able to have their views heard.
Encourage Port Users to provide written feedback, and will also allow alternative acceptable means of providing feedback.	Stakeholders could participate in the 2022 Industry Consultation through a range of channels, including: ▪ Making a written submission; ▪ Attending an online engagement forum, with two identical forums held during the consultation period; and ▪ Requesting a one-on-one meeting with the PoM team.
Use feedback obtained during engagement activities and any written responses to inform decision making and ensure PoM has had regard to Port User feedback.	This 2022-23 TCS provides a summary of: ▪ The issues raised and feedback provided by Port Users and other stakeholders; and ▪ How we have had regard to the comments provided by Port Users and other stakeholders.
Provide for complaints on engagement matters to be directed to PoM in the first instance.	There was an opportunity for stakeholders to raise complaints on engagement matters via: ▪ Contact details were made available for the 2022 Industry Consultation, in addition to the contact details that regularly appear in communications like the Industry Updates; and ▪ One of the key topics of engagement was for stakeholders to provide feedback on approach to the 2022 Industry Consultation program
Keep Government informed about any material feedback and how that feedback is to be addressed.	In addition to public reporting via the TCS, we will offer briefings to key Government stakeholders and provide updates in regular meetings with these stakeholders.

4 Capital expenditure

4.1 Overview

This Chapter of the TCS:

- Describes historical capital expenditure outcomes and variations from forecast expenditure;
- Provides an overview of PoM's approach to capital planning and delivery;
- Outlines the capital expenditure forecast for the 2022-23 Regulatory Period and the service outcomes for each project; and
- Summarises our engagement on the projects that comprise the forecast, what we've heard and how we have had regard to the comments provided by Port Users.

PoM's gross prescribed capex forecast for the 2022-23 Regulatory Period is $192.8m (Table 7). More than two-thirds of the forecast is made up by the Port Rail Transformation Project (PRTP), Swanson Dock West remediation, and Webb Dock East Berth Extension.

Table 7 Forecast prescribed capex for the 2022-23 Regulatory Period, $ million

Asset class	2022-23 (F)
Channel	6.5
Wharves	72.3
Road	7.7
Port Rail Transformation Project	90.5
Other Rail	3.2
Plant	6.4
Other	6.2
Total	**192.8**

Notes: 1. Capex is expressed in gross terms (i.e. before capital contributions and asset disposals are removed).
2. The 'Channel' asset class includes channel protection assets.

4.2 Regulatory context

4.2.1 Pricing Order requirements

Clause 4.2.1(c) of the Pricing Order provides that PoM is entitled to recover a return on:

> *…efficient capital expenditure when incurred, or to be incurred during that Financial Year, by the Port Licence Holder, acting prudently, in the provision of the Prescribed Services ….*

Clause 8.2 of the Pricing Order provides in respect of forecasts:

> *8.2.1 Information in the nature of an estimate or forecast must be supported by a statement of the basis of the forecast or estimate.*
>
> *8.2.2 A forecast or estimate:*
>
> *(a) must be arrived at on a reasonable basis; and*
>
> *(b) must represent the best forecast or estimate possible in the circumstances.*

Under clauses 4.2.4 and 4.2.5 of the Pricing Order the requirement that capital expenditure be both prudent and efficient does not apply to the Port Rail Transformation Project (PRTP), the Port Capacity

Project (PCP) or any other project necessary to comply with a term of the Port Lease. These projects are deemed to be prudent, but must still be demonstrated to be efficient.

4.2.2 ESC Pricing Order compliance inquiry

In its inquiry into PoM's compliance with the Pricing Order the ESC found PoM's approach to capital expenditure, forecasting, planning and management over 2016-2021 period to be compliant with the Pricing Order.[35] However, the ESC considered PoM's existing assurance process may not be adequate for the next review period given potentially more complex and larger capital spends. The ESC indicated that it expects PoM to demonstrate the following for the next review period:[36]

- Sufficiently detailed business cases;
- Appropriate management of risk between PoM and Port Users through its cost estimation and procurement process; and
- Capital projects meet the needs of Port Users and also Victorian consumers.

4.2.3 PoM's response to the ESC findings

Following the release of the ESC's final report, PoM engaged Deloitte Access Economics (Deloitte) to assist with responding to, and complying with the findings and recommendations in the ESC's final report on operating expenditure, cost allocation and capital expenditure (including addressing observations from the ESC's consultant, FTI consulting).

Deloitte's report identifies the regulatory requirements, the ESC's concerns and findings, and the actions Deloitte believes PoM needs to undertake to ensure compliance. Deloitte also set out a suggested timeline for these actions, noting that some are higher priority than others and that it will not be possible for all of the actions to be completed in time for submission of the 2022-23 TCS.

The following table summarises Deloitte's recommendations in relation to capital expenditure and PoM's actions in response. Some actions undertaken pre-dated the ESC's final report.

[35] ESC, *Inquiry into the Port of Melbourne compliance with the Pricing Order: Final Report,* 31 December 2021, p.96
[36] ESC, *Inquiry into the Port of Melbourne compliance with the Pricing Order: Final Report,* 31 December 2021, p.96

Table 8 Deloitte recommended compliance actions – Capex

<table>
<tr><th>Issue</th><th>Deloitte recommendations</th><th>PoM actions</th></tr>
<tr><td>Detailed business cases</td><td>PoM should strengthen its business case process in two key areas:
Increasing the level of detail in the business cases/gate reports;
Ensuring that business case and gate requirements are followed by PoM staff. This could involve action such as:
Holding internal training sessions to reiterate the need for high quality business cases;
Providing additional guidance material to assist PoM staff to prepare business cases; and
Not including projects in forecasts if appropriate business cases have not been prepared</td><td>Actions in response will be delivered via the current review of the Enterprise Project Management Framework (EPMF), due for completion by December 2022.
Relevant activities include:
Refining and clarifying the Stage Gate Process (including contingencies at each stage);
Business case documentation will be reviewed to be standardised for major and minor projects. The FY23 budget includes funding for a targeted roll-out of Better Business Cases training; and
The capital reporting process is to be reviewed to identify opportunities for improvement including efficient reporting for financial management and project management and dashboard capability.</td></tr>
<tr><td>Contingencies</td><td>PoM should develop internal guidance that staff can reference when setting contingencies, particularly for large, complex and more risky projects.
Post-project reviews should examine, amongst other things, the contingencies adopted in the original forecasts, and consider whether there are any lessons for estimating contingencies in future projects.</td><td>Actions already complete and in implementation:
Independent Quantity Surveyors are engaged for independent advice on cost estimates early in the project lifecycle;
For complex projects, Early Contractor Involvement (ECI) procurement methods are sometimes utilised to reduce uncertainty / contingency;
Exclusions and risks and contingencies are now quantified where possible in consultation with suppliers and Independent Quantity Surveyors; and
Post project reviews will include consideration of the extent of use of contingencies.
Further guidance on contingencies drawing on the above will be developed by end 2022.</td></tr>
</table>

Issue	Deloitte recommendations	PoM actions
Pipeline view of projects	PoM should consider the costs and benefits of a pipeline view of projects, including asking its key stakeholders whether they see any benefits or issues with it, before proceeding.	▪ The PDS Delivery Program outlines the timing and sequencing of projects over the next 15 years. PoM sought feedback from stakeholders on the PDS Delivery Program during the 2022 Industry Consultation and will implement suggested changes in the next update. ▪ The capital reporting process is to be reviewed to identify opportunities for improvement including efficient reporting for financial management and project management & dashboard capability, to be complete by end FY23.
Second capex categorisation	PoM should review the benefits and costs of adding a second categorisation, and only do so if clear net gains can be demonstrated.	▪ The capital reporting process is to be reviewed to identify opportunities for improvement including efficient reporting for financial management and project management & dashboard capability, with a target date for completion of end FY23. ▪ We have reviewed the possibility of adding a second capex categorisation, but having found that it is not clear that there would be any benefits to PoM or Port Users we have not implemented this change.
Review ECI process	PoM should review its existing early contractor involvement (ECI) process with a focus on ensuring prudent and efficient costs by: ▪ Developing a detailed cost estimate before starting the ECI process; ▪ Having two ECI tenderers; ▪ Ensuring that alternative tenders are a realistic option if the ECI process does not result in an efficient outcome; and ▪ Locking in rates with ECI tenderers.	▪ In late 2021, PoM commissioned an internal audit to assess the processes and controls in place to support the execution of the ECI approach. The internal audit reported a ‘satisfactory’ rating, and provided (minor) recommendations, which management has adopted for implementation by June 2022. ▪ A performance framework will be developed as a component of the EPMF to manage, measure, and demonstrate performance against overall project outcomes/critical success factors, with a target completion date of December 2022.

Issue	Deloitte recommendations	PoM actions
Review approach to establishing procurement and contracting strategy	PoM should: ▪ Review the multi-criteria analysis criteria used in determining preferred procurement and contracting strategies, and ensure that they reflect the need for expenditure to be prudent and efficient ▪ Ensure that workshops held to determine procurement and contracting strategies for major projects: – Do not have a 'preferred option' coming in; – Include PoM staff who have no involvement with the project in question; and – Are facilitated by independent third party experts	Actions already complete and in implementation: ▪ Depending on project requirements, Independent Procurement experts are engaged to facilitate the identification of appropriate procurement delivery approach which considers amongst other factors prudency and efficiency; ▪ The process also captures data inputs from suppliers and vendors through market engagement; and ▪ Any recommended options are not final until assumptions are validated and if assumptions materially change then recommended options are reviewed prior to making a final decision.
Extend terms of reference for governance committees	PoM should update the terms of reference for the governance committees to ensure consistency with the project management framework.	▪ As part of the annual review of the EPMF, the Terms of Reference for governance committees are being reviewed and updated to ensure standardisation and alignment. This review will be completed in June 2022.

4.3 Actual capital expenditure outcomes

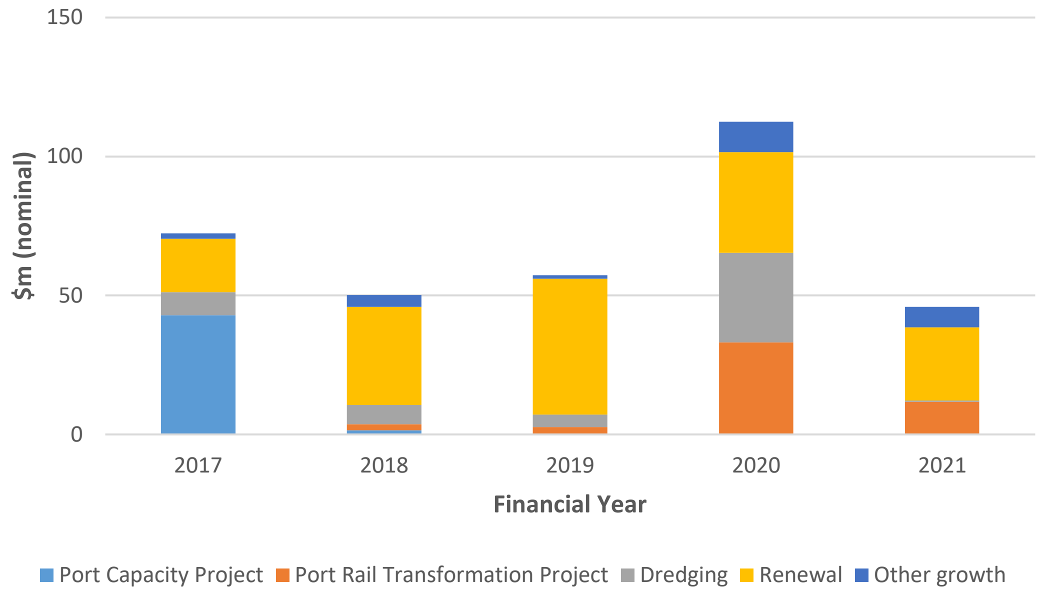
4.3.1 Historic capital expenditure

Figure 1 provides a summary of actual capex by driver since the commencement of the Port Lease. Expenditure has varied from a low of $50.2m in 2017-18 to $112.5m in 2019-20.[37] Drivers of the capital program have included:

- Completion of the Port Capacity Project in 2016-17;
- Dredging in 2019-20, with a portion of the program brought forward to take advantage of availability of the large dredge Magnor and achieve cost reductions;
- Commencement of the PRTP in 2019-20; and
- Rehabilitation of Swanson Dock East.

[37] All capex figures in this attachment are expressed in gross prescribed terms (i.e. before capital contributions and asset disposals are removed and inclusive of capitalised costs) unless otherwise stated.

Figure 1: Prescribed capex by driver, 2016-17 to 2020-21 ($m, nominal)



Actual expenditure in 2020-21

Actual prescribed capex in 2020-21 was $45.9m, $35.0m below the forecast of $80.9m.

Table 9 Comparison of 2020-21 forecast and actual capex, ($m, nominal)

	2020-21(f)	2020-21(A)	Difference (%)	Difference ($m)
Capex	80.9	45.9	43.3%	35.0

Note: Capex is expressed in gross prescribed terms (i.e. before capital contributions and asset disposals are removed).

The underspend against forecast has occurred for a variety of reasons, with the impacts of COVID-19 pandemic having widespread effects:

- Approximately half the under-expenditure occurred because capex on the PRTP was $17.3m below the forecast of $29.0m. The COVID-19 pandemic created significant challenges to infrastructure projects with the interconnectedness, complexity and global nature of supply chains and workforce affecting cost and schedule compared to initial assumptions. Early works on the PRTP were to commence during FY21; however due to the COVID-19 pandemic, early works were deferred to the construction phase which commenced in September 2021. This occurred due to delays in the completion and acceptance of the signalling design as well as ongoing global supply chain constraints that continue to affect the timely availability of materials (such as storm water pits, electrical substations and HV cabling), with suppliers finding it difficult to meet scheduled delivery dates;
- [redacted]
- The Swanson Dock East rehabilitation (stage 2) was underspent by $2.4m because some work was deferred from 2020-21 to 2021-22 in order to minimise the impact on stevedore operations.

In total there were 29 projects with spending above forecast, and 61 projects with spending below forecast. General factors influencing the underspend included:

- Continuing COVID-related lockdowns in 2020-21 reduced the capacity of contractors to undertake work; and

- Towards the end of 2020-21 shortages and delays in the supply of construction materials and equipment became apparent. These issues have continued and indeed been more pronounced throughout 2021-22.

Capital expenditure in 2020-21 includes the capitalisation of operating costs and management fees totalling $6.5m.

Estimated expenditure in 2021-22

The 2021-22 financial year is not yet complete, however the current estimate is that capex will be approximately $125.8m compared to a forecast of $186.0m.

Table 10 Comparison of 2021-22 forecast and estimated capex, ($m, nominal)

	2021-22(f)	2021-22(e)	Difference (%)	Difference ($m)
Capex	186.0	125.8	32.4%	60.2

Expenditure in 2021-22 has continued to be impacted by COVID-19 related supply chain constraints:

- PRTP has experienced delays on interim milestones due to the disruption of supply chains and resources attributed to COVID-19 impacting cost and schedule compared to initial assumptions and as a result expenditure was lower in 2021-22 than anticipated. Nevertheless it remains on track to meet practical completion by February 2023, although delivery timeframes have become tighter due to the delays experienced; and
- The Swanson Dock West Remediation and Webb Dock East Berth 4 and 5 extension have been impacted by COVID 19 shutdowns in China delaying the delivery dates for piles from FY22 to FY23.

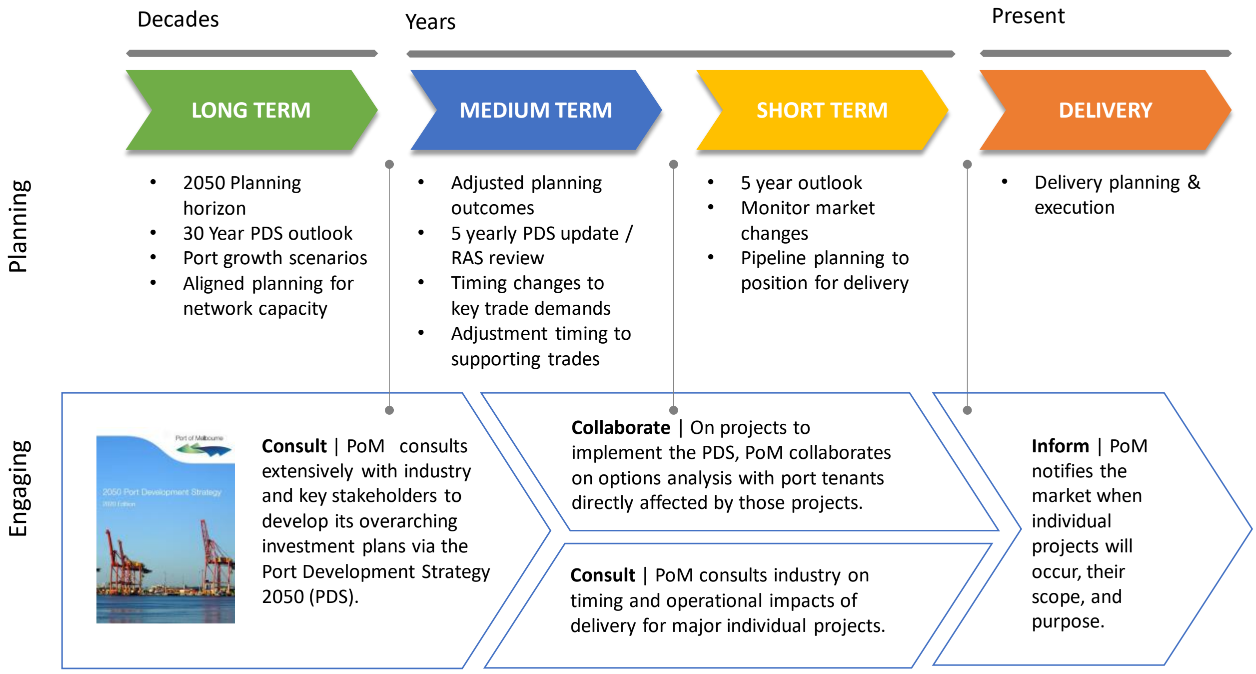
4.4 Approach to capital planning and delivery

PoM’s capex planning framework comprises a number of components that enable it to be confident that it is making soundly based, prudent and efficient investment decisions that will deliver outcomes that support the long-term interests of Port Users and Victorian consumers.

The planning processes to deliver on PoM’s obligations necessarily need to span long time horizons. PoM employs fit for purpose engagement with stakeholders as well as internal governance processes consistent with each of these planning, scoping and works delivery horizons.

Figure 2 illustrates the planning and engagement horizons and associated activities.

Figure 2: Planning horizons and stakeholder engagement



The Compass – PoM's Integrated Management System

The Port Concession Deed (PCD) contains specific obligations that require PoM to prepare a Port Development Implementation Plan (PDIP) and maintain accreditation to ISO 55001-Asset Management. This certification was achieved on 11 April 2019, subsequent audits of compliance have been successfully passed, and renewal of certification will occur later in 2022.

PoM seeks to achieve broader and sustainable business efficiencies through an internal Integrated Management System (the Compass) that encompasses quality, safety, environmental and asset management systems. The Compass is designed to meet the requirements of three further ISO standards in addition to ISO 55001. These are ISO-9001:2015 – Quality Management Systems, ISO 14001:2015 – Environmental Management and ISO 45001:2018 – Occupational Health and Safety.

The intent of the Compass is to ensure PoM:

- Identifies and systematically meets customer, stakeholder and interested party needs, expectations and compliance requirements;
- Operates in a manner that minimises potential harm to staff, sub-contractors, the community and the environment;
- Manages its assets as a prudent port operator in accordance with compliance obligations and strategic objectives, considering stakeholder requirements and expectations; and
- Continuously improves performance in the above areas.

PoM maintains a range of policies and process flows to support its integrated management framework. Collectively they provide a framework to enable PoM to meet its responsibilities and goals.

PoM's Asset Management System

All phases of investment planning and delivery are supported by PoM's asset management system. The asset management system was upgraded from Conquest to TechnologyOne in August 2021.

As noted above, under the PCD PoM is required to achieve certification of its asset management system to ISO 55001:2014 - Asset Management by 2021, which has been met.

The certification process has involved the development of a Strategic Asset Management Plan (SAMP), which provides a framework to define asset management objectives in line with current organisational goals and aligns these with operational processes. Long-term asset management strategies and individual asset management plans align with the SAMP and overall Asset Management System.

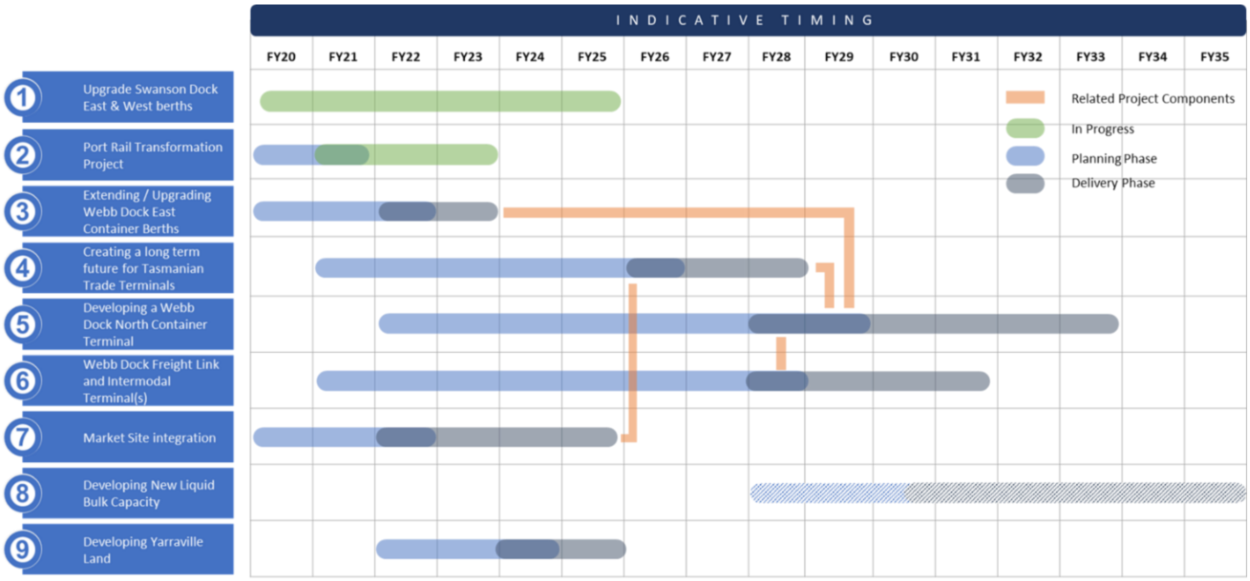
Figure 3 – PoM's ISO certified asset management system

Key long term Asset Management Strategies include the PDS, the PDIP and the PDS Delivery Program:

- The 2050 PDS[38] is PoM's 30-year roadmap for the growth and development of the port (through to 2050). The PDS outlines our development objectives and details key projects that are forecast to be required by 2035 and 2050 to meet demand and support ongoing efficiency and productivity improvements. The PDS was developed consistent with the requirements of the Ministerial Guidelines[39] and in consultation with industry, key stakeholders and the community, with 190 stakeholders participating in the development of the 2050 PDS. It was finalised in 2020. Subsequently, the PDS will be updated and provided to the Victorian Government (at least) every five years.
- In addition to the PDS, PoM must prepare, maintain and update a Port Development Implementation Plan (PDIP) for the port precinct and the port. The PDIP includes a more detailed 15-year view of planned development activities within the Port to support port capacity and growth in trade demand. PoM submitted its first PDIP to the Victorian Government on 31 October 2017 and subsequently updated the PDIP in 2020 alongside the PDS. The PDIP is not a public document and is intended to only be used by PoM and the Victorian Government.
- The PDS Delivery Program provides a public version of the PDIP to provide Port Users and other stakeholders with additional information about the scope and timing of projects in the PDS. The PDS Delivery Program outlines the indicative timing and sequencing of each of the projects outlined in the 2050 PDS over the next 15 years. The PDS Delivery Program reflects PoM's detailed internal planning to ensure that the port is developed in a logically sequenced manner and to meet obligations to develop the port. As with the PDS, the PDS Delivery Program is available on PoM's website. An extract from the PDS Delivery Program as at April 2021 is shown below. The timing and scope of projects, particularly those that are yet to commence, is regularly reviewed to reflect stakeholder input, updated asset condition reports, market needs and procurement considerations. For example, the new liquid bulk capacity project is on hold following the announcement of the Altona closure and the conversion of the refinery to an import terminal. Each of these projects is discussed briefly in Table 11.

[38] The PDS is available on our website, 2050 Port Development Strategy | Port of Melbourne
[39] The Ministerial Guidelines are available on the Department of Transport website, Port development strategies | Department of Transport

Figure 4: 2050 PDS Projects to be delivered between 2020 – 2035 (as at April 2021)



Source: PDS Delivery Program, April 2021

PoM's Asset Management System and supporting documents were reviewed by FTI Consulting as part of the ESC's Inquiry into PoM's compliance with the Pricing Order. FTI concluded that:[40]

> *these documents … are considered to represent a comprehensive and detailed Asset Management System. It is understood that considerable investment has been made over recent years. The system represents best practice, and many aspects (for example, wharves, dredging) are highly advanced and tailored to the Port of Melbourne's specific assets.*

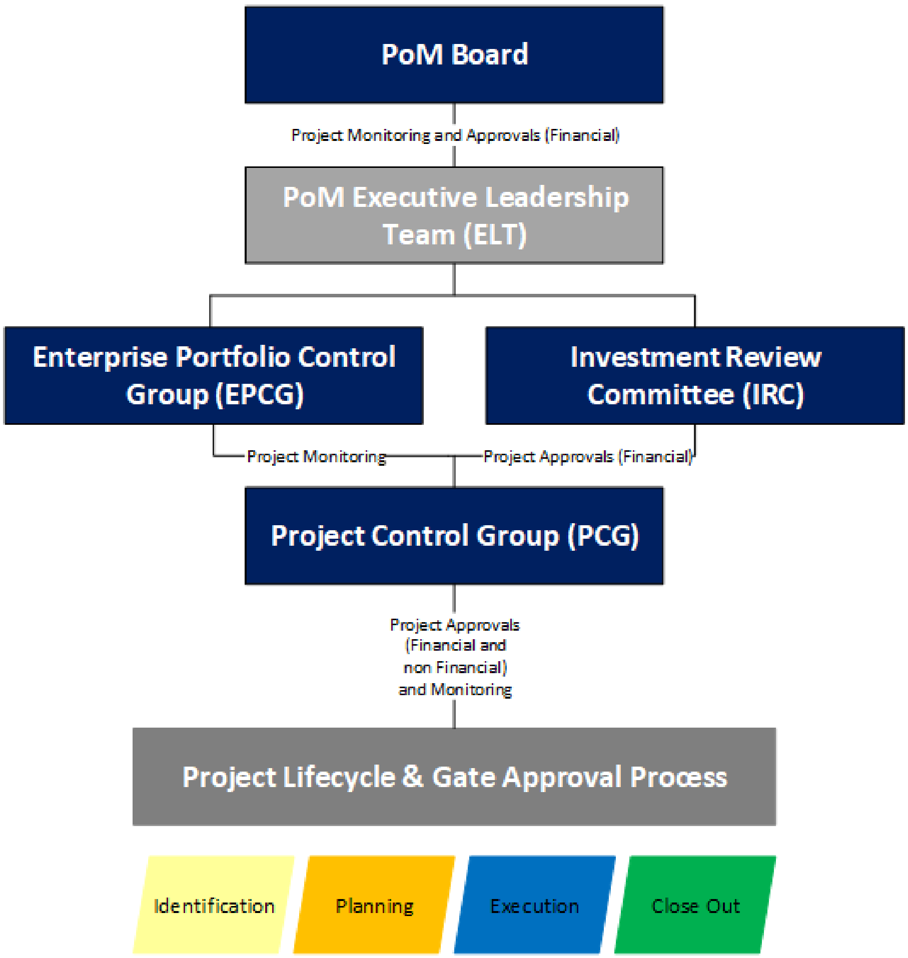
Capital governance

PoM's capex planning and delivery governance structure consists of two discrete, executive level committees: the Investment Review Committee (IRC); and the Enterprise Project Control Group (EPCG), with the latter supported by specially formed Project Control Groups (PCGs) in the case of key projects.

The two executive committees are supported by the project lifecycle and approval gate process which defines the path that a project will take within our business; key minimum deliverables and key decision points and approvals required. Both committees operate within predefined terms of reference. These specify membership obligations, regularity of meetings, decision-making powers, dealing with issues out of session and the escalation of issues. As noted in Table 8, as per the recommendations made by FTI, the Terms of Reference for governance committees are being reviewed and updated to ensure standardisation and alignment part of the annual review of the EPMF.

[40] FTI Consulting, *Review of Port of Melbourne's cost allocation, demand and expenditure - Final Report*, November 2021, p.iii

Figure 5 – Capex Project Governance Framework



Investment Review Committee (IRC)

The IRC is chaired by the CEO and is the executive committee that evaluates and endorses projects for CEO and/or Board approval of capex projects. The IRC ensures that project investments are aligned with the Compass objectives, budgetary constraints, support business requirements, have the capability to deliver, comply with delegations of authority (DoA), and demonstrate a positive and prudent return on investment.

Once projects are approved, the monitoring and control of projects is governed through the relevant Project Control Groups (PCG).

Key accountabilities of the IRC are:

- Strategic direction, development, changes and endorsement of our capital investment program;
- Capital expenditure planning, scheduling, cash flow management, program and project budget expenditure approvals (including project allowance and contingency);
- Endorsement of capex projects for CEO and/or Board approval (within DoA limits); and
- Approves/disapproves any project at key gate stages within the project lifecycle and approval gate process.

The IRC typically meets monthly or otherwise as required.

Enterprise Portfolio Control Group (EPCG)

The EPCG is chaired by the CEO and provides executive management oversight of the whole project portfolio across PoM ensuring projects within the portfolio are being delivered in accordance with their project plan to time, cost, quality and risk.

Key accountabilities of the EPCG are:

- Ensure overall alignment of the project portfolio with The Compass objectives and strategies;
- Review and resolve conflicting goals and objectives;
- Review tracking against project performance indicators as defined in the Corporate Strategy and Business Plan, and where an unfavourable status is reported, ensure these are appropriately addressed and the impact on other projects is assessed and actioned;
- Review and address escalated issues and risks in a timely manner;
- Assess forward business activity for potential change or impact from external forces, and take appropriate mitigating actions;
- Ensure there is the current and future resource capacity for the required project across the project portfolio and other business activities;
- Provide leadership in making, enforcing, carrying out, and communicating decisions;
- Consider and balance the degree of organisational change required to achieve outcomes across the portfolio;
- Ensure there is consistency of key messages to be communicated to external stakeholders;
- The Portfolio Governance Framework is reviewed and updated to reflect learnings and is fit for purpose. Includes approval of project governance related policies and processes; and
- Ensure a consistent and transparent reporting process is implemented.

The EPCG typically meets quarterly or otherwise as required.

Project Control Groups

The EPCG is supported by a number of individual Project Control Groups (PCGs).

PCGs are formed for individual high risk and/or high complexity projects and/or large value projects at the discretion of the ELT. This typically takes place where a high level of detailed project governance is required to manage risks accordingly and importantly support the relevant project manager/project team to deliver the desired project outcomes. Critically, the PCG is also responsible for ensuring appropriate management of project components outlined in the project management plan, and specifically, change request approvals.

The PCG is typically chaired by the executive sponsor of the project and includes key senior management of business units. Each PCG operates within a predefined terms of reference.

As noted in Table 8 in section 4.2.3, the Terms of Reference for governance committees are being reviewed and updated to ensure standardisation and alignment as part of the annual review of the EPMF.

The key functions of the PCG typically include:

- Exercise appropriate oversight of all project elements, including safety, quality, scope, timeline, risks and financials;
- Maintain alignment with overall Compass Objectives and its relationship to other business activities/projects;
- Approve decisions within delegation and/or recommend decisions to the CEO, and/or the Investment Review Committee, and/ or the Board consistent with PoM’s Delegations of Authority (DoA);
- Ensure timely availability of appropriate project and business resources;
- Resolve emerging issues and escalations in a timely manner;
- Ensure stakeholder management (internal and external) is appropriate, including timely publication of project updates/ communication;

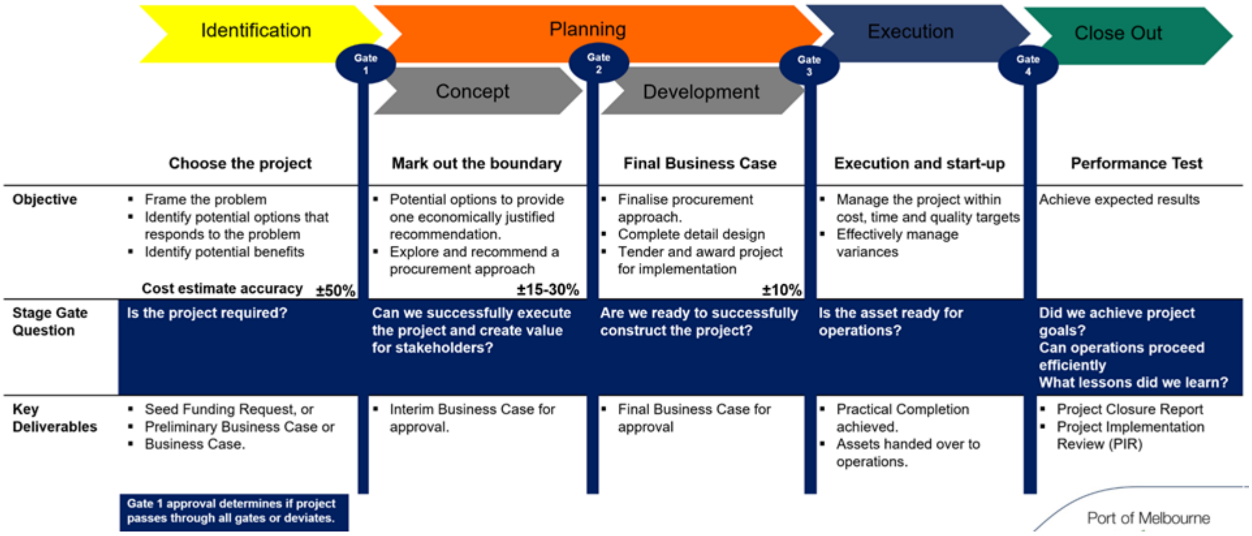
- Review and hold the project's management team accountable for benefits realisation;
- Ensure Organisational change management practices are effectively applied; and
- PCGs report to the EPCG to provide updates on key project decisions and direction.

Project Lifecycle and Approval Gate Process

The Project Lifecycle is supported by a four-stage gate approval process (Figure 6) with a purpose of providing a staged approach to expenditure approval with specific controls and considerations at each approval stage. The process has an interrelationship with the DoA limits and provides transparency and rigour at each approval stage.

The approval gate process is a guideline only and depending on project specifics, from time to time projects may not go through each stage gate for approval of expenditure and progress. If this is to occur approval is required at Stage 1 explaining the desired approval approach.

Figure 6 Project Lifecycle and Approval Gate Process



Capitalisation framework

PoM capitalises costs in accordance with its Capitalisation of Costs Framework. This framework was most recently refreshed in April 2021. It sets out the basis by which PoM capitalises its costs in accordance with the relevant accounting standard including AASB16 Property, Plant & Equipment, AASB 138 Intangible Assets, AASB 123 Borrowing Costs and AASB13 Fair Value Measurement. It is maintained by PoM's Financial Controller.

PoM's capitalisation framework, and compliance with the framework, was reviewed as part of PoM's internal audit process in 2022 by Deloitte Touche Tohmatsu. The auditor's conclusion noted that *our testing over capitalised costs and assets validated the strength of the processes and controls … with all costs tested being capital in nature with appropriate review and approval*. [41]

Capitalised cost balances are also subject to PoM's annual external audit process (currently undertaken by KPMG) which provides the Board with independent assurance that the capitalisation process being followed is consistent and compliant with accounting standards and practices.

A copy of PoM's capitalisation framework has been provided to the ESC.

[41] Deloitte Touche Tohmatsu, *Internal Audit of Capitalisation of Costs Framework*, April 2022, p. 6

4.5 2022-23 Capex forecast and service outcomes

4.5.1 Overview of forecast approach

Much of PoM's capex is for renewals and reflects contractual, compliance and regulatory obligations (for example, obligations under the Port Concession Deed to maintain minimum remaining service lives for each class of port asset).

Growth capex is primarily related to expenditure on the PRTP and the Webb Dock East Berth Extension. Both of these projects are in the construction phase with established timeframes for delivery and payments. In addition, a small amount of growth capex is included for planning the next tranche of container capacity under the Port Capacity Enhancement Program (PCEP). This project is in its Identification Stage, with a significant program of stakeholder engagement to occur subsequently in 2022.

Appropriate allocation of risk

The 2022-23 capex forecast was initially developed using a bottom-up forecasting methodology, which was subsequently subject to a detailed top-down review by the Finance Division, Executive (via the Investment Review Committee), Directors, Shareholders and Board (including its Audit and Risk Management Committee) to refine the forecasts and identify opportunities for efficiencies. Factors influencing the capex forecast for 2022-23 include:

- Capital projects continue to be affected by shortages and delays in delivery of materials and equipment. The lingering impact of COVID-19 continues to affect both PoM's local contractors and their workforce, as well as materials and equipment coming from China, particularly the Shanghai region;
- Given supply constraints and an increase in costs for construction materials, equipment and workforce, PoM has revisited project costs and contingencies and looked for opportunities to delay projects beyond 2022-23 when these pricing pressures are expected to be less acute; and
- High levels of expenditure are associated with several projects that are currently in progress - including the PRTP, Swanson Dock West remediation and Webb Dock East Berth Extension.

In recognition of these factors, as well as the potential for matters outside PoM's control to impact expenditure (for example further COVID-related disruptions both locally and overseas), we have made material downward adjustments to the capex forecast. Ultimately PoM expects to exceed the forecast, in accordance with the planned delivery timeframes.

Improvements to forecasting methodology

In addition to the actions outlined in Table 8 (section 4.2.3), the following actions have been undertaken to improve our forecasting methodology:

- We have engaged an Independent Quantity Surveyor to provide benchmark unit rates across various asset types to inform budget forecasting for minor remediation works <$10M;
- Depending on project needs, Independent Quantity Surveyors are engaged for advice on cost estimates early in the project lifecycle and these estimates are continuously updated by the quantity surveyor as the project matures through the project lifecycle; and
- Engagement of independent expert advisors on Quality Assurance, which supports improvement in all areas (e.g. utilising Swanson Dock East remediation learnings on productivity rates and improved engineering processes).

4.5.2 2022-23 forecast and service outcomes

PoM's gross prescribed capex forecast for the 2022-23 Regulatory Period is $192.8m. Three key projects represent $139.3m or just over 70% of the forecast:

- [redacted] on the PRTP;
- [redacted] on the Swanson Dock West remediation; and
- [redacted] on the Webb Dock East Berth Extension.

The figure below summarises the forecast.

Figure 7 – 2022-23 forecast gross prescribed capex

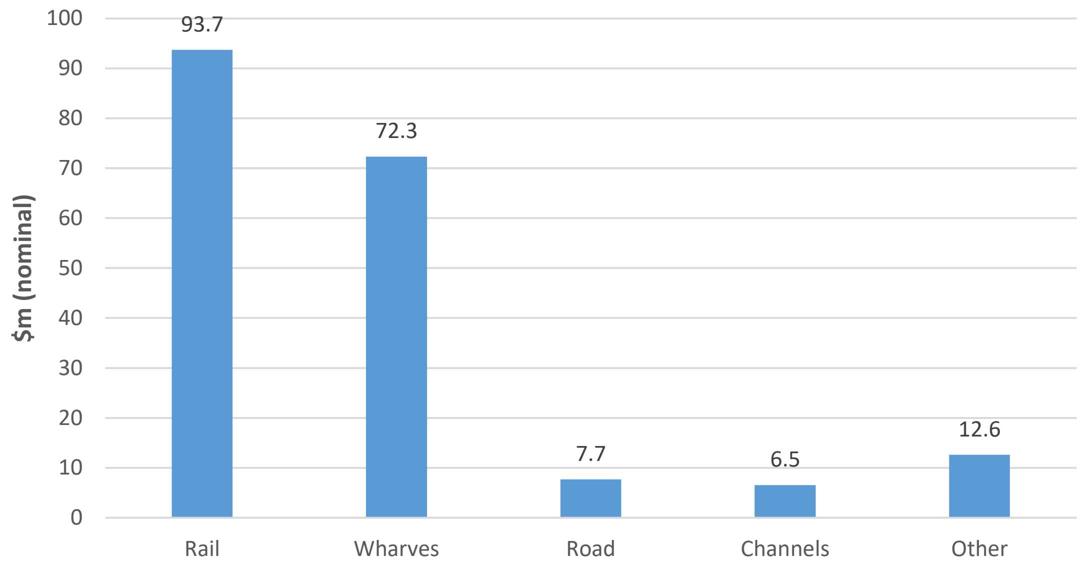


Table 11 below summarises forecast 2022-23 capex on each of the projects identified in the PDS Delivery Program and their service outcomes.

In previous TCS submissions we have reported on a number of performance standards related to matters such as safety, reliability and project planning and delivery. In our engagement with Port Users we received very little feedback on these standards.[42] In the 2022 Industry Consultation, we sought further input from Port Users on the performance information that they value most – through this process we have identified that Port Users have a strong interest in capacity-related measures, but limited interest in performance standards of the kind previously set out in the TCS. On this basis we have discontinued the previously reported standards and will instead focus on the development of appropriate performance data and metrics as outlined in the 2022 Consultation Paper. Our consultation on these issues is summarised in Chapter 3.

Most of the projects outlined in the PDS and progressing in 2022-23 are required to meet an obligation under the Port Lease or Port Concession Deed. Clause 4.2.4 of the Pricing Order deems capital works to comply with a term of the Port Lease or any other obligation under a Transaction Arrangement to be prudent.

Further detail on each of the projects can be found in the PDS Delivery Program.

[42] PoM 2021-22 TCS General Statement, May 2021, section 7.1, pp.30-31

Table 11 Expenditure on PDS projects in 2022-23

Project	2022-23 Capex ($m)	Forecast notes	Service outcomes
Upgrade Swanson Dock East & West berths	[redacted]	Swanson Dock West remediation will continue to 2026-27. [redacted]	Required to meet obligations under the **Port Concession Deed** to: ▪ maintain, repair and replace Port Assets in accordance with Good Operating Practice (clause 11), including maintaining minimum wharf load requirements as per the Port Load Chart; and ▪ maintain minimum remaining service life (Schedule 8). Required to meet obligations under the **Port Lease** to: ▪ manage, operate and maintain the port in accordance with Good Operating Practice (clause 8.2(a).
Port Rail Transformation Project	[redacted]	This project is on track and PoM is confident it will be completed in 2022-23 (forecast February 2023). [redacted]	Improved access for regional Victoria and interstate rail services and the infrastructure and operational arrangements to support the delivery of metropolitan Port Rail Shuttle services. Under the **Port Rail Transformation Deed**, to assist meeting: ▪ the Rail Objectives (shared with the State) such as making rail more competitive with road; and ▪ the State's Rail Mode Shift Target, of no less than 10% of international containers transported by rail.
Extending and upgrading Webb Dock East Container Berths	[redacted]	Project is being affected by COVID impacts in China but is nevertheless forecast to be finished in 2022-23. [redacted]	Required to meet PoM's obligations under clause 8.2 of the **Port Lease** to: ▪ Manage, operate and maintain the Port in accordance with Good Operating Practice; and ▪ Ensure that the Port is capable of providing access to intrastate, interstate and international shipping, including being able to reasonably accommodate vessels of the size and type reasonably required to meet the trade requirements at the Port from time to time. Required to meet obligations under clause 26.2 of the **Port Lease** to develop the port to: ▪ Provide quality and efficiency standards expected of a major port.

Project	2022-23 Capex ($m)	Forecast notes	Service outcomes
PCEP (including potential Webb Dock North and Tasmanian relocation projects)	[redacted]	2022-23 expenditure includes pre-business case analysis and due diligence related costs (e.g. planning, engagement, capacity analysis, concept design), cost benefit analysis, and staff costs for business case development.	Directed towards meeting PoM's obligations under clause 26 of the **Port Lease** to Develop the Port land and infrastructure to: ▪ Cater for actual and reasonably anticipated growth; ▪ Provide quality and efficiency standards expected of a major port; and ▪ Maintain the Port's leading position among major Australian ports in terms of its quality, efficiency and effectiveness. Consultation on service outcomes will be undertaken in 2022.
Webb Dock Freight Link	[redacted]	Investment in planning, refined design, site investigations in pylon locations to confirm feasibility and cost definition, vessel survey to determine bridge height and development of materials for engagement on need and possible funding arrangements.	Provide improved freight transport connectivity between Swanson Dock and Webb Dock and between Webb Dock and the wider rail network to support increased Webb Dock container handling capacity. Assist in meeting the State's Rail Mode Shift Target, of no less than 10% of international containers transported by rail. Consultation on service outcomes will precede investment decisions.
Northward integration with Dynon (Market site)	[redacted]	2022-23 expenditure includes internal time, pre-business case and due diligence related costs.	Integrating the Market Site with the Port will provide improved road and rail access to the Port to support container trade growth and opportunities for delivery of higher utilisation, productivity and efficiency of waterfront port land.
Develop new liquid bulk berth (if required)	Nil	Project on hold following the announcement of the Altona refinery closure and transition of the refinery to a fuel import facility.	Directed towards meeting PoM's development obligations under clause 26 of the Port Lease. Consultation on service outcomes will precede investment decisions.
Develop Yarraville precinct	Nil	Project delayed as site being used by West Gate Tunnel project for construction activities, which is behind schedule.	Directed towards meeting PoM's development obligations under clause 26 of the Port Lease. Consultation on service outcomes will precede investment decisions.

Capitalisation of costs

Capitalisation of opex and management fees will occur pursuant to PoM's Capitalisation of Costs Framework (see Appendix P). [redacted]

Medium-term outlook

In the medium-term PoM expects key drivers of capex spending to include:

- Finalisation of the PRTP and the Webb Dock East Berth Extension;
- Increased focus on growth expenditure relating to:
  - the proposed acquisition of the former market site;

  - any expenditure required under the PCEP, noting that this will be the subject of our enhanced engagement program on port development, which will commence in the second half of 2022; and
- Ongoing dredging requirements.

Medium and longer-term investment plans will form part of our engagement on port development and longer regulatory period in the second half of 2022.

4.6 Engagement on projects progressing in 2022-23

Engagement processes and timeframes are customised to specific projects and or planning documents. In the 2022-23 TCS consultation window, different projects have been at different stages of the planning horizon. The engagement channels and scope of topics covered for each project reflect this.

The following sections provide an overview of consultation on the following projects progressing in 2022-23:

- Swanson Dock West Remediation – Project Lifecycle Stage: Development ;
- Port Rail Transformation project – Project Lifecycle Stage: Execution; and
- Webb Dock East Berth Extension – Project Lifecycle Stage: Execution.

No major growth projects are commencing in 2022-23. We consulted stakeholders and Port Users on their preferences for how we engage on our capital planning and port development and will actively take their feedback into account when designing our approach to engagement on port development, which we will review and refresh this year.

4.6.1 Swanson Dock West Remediation – Development Stage

The Swanson Dock West (SDW) wharf remediation project was consulted on and included in our Port Development Strategy (PDS) and PDS Delivery Program. In the lead up to this TCS PoM has continued to engage on the options assessment and works delivery aspect of this project, as summarised in Table 12. In addition to the engagement outlined below, PoM will engage more broadly with other Port Users on the timing and scope of the project and have regard to feedback provided.

Table 12 Summary of engagement – SDW remediation

Channel	Content covered	Instances
Swanson Dock Forum meetings	Introduction of new Harbour Master for Port of Melbourne. Key Swanson Dock projects, initiatives & issues: ▪ Swanson Dock West remediation project; ▪ Update on large vessel visits into Port of Melbourne; ▪ Night time trial update and success criteria, other changes to larger vessel restrictions or class sizes; ▪ SDE & SDW Berth 2 – 150T Bollards update; and ▪ Coode Rd closure update. Key port projects: ▪ Webb Dock East Berth 4 & 5 extension project; ▪ Gellibrand Pier Mooring Dolphin upgrade; and ▪ Completion of the Short Rd Marine Maintenance facility.	9 March 2022 Meeting attended by Ports Victoria, DP World, Patricks, PoM – 10 attendees This follows from the same forum meeting on 5 March 2021 attended by DP World, Patrick, VPCM, PoM – 9 attendees, and the remediation options workshop discussed below. Following COVID disruptions, meetings are now scheduled every two months.

Channel	Content covered	Instances
Swanson Dock options workshop	Update to VPCM on the upcoming berth remediation works at Swanson Dock, including scope and timing. Obtain feedback on vessel scheduling, operational controls and communication protocols for efficient operations and timely completion of the remediation works. The agenda covered: ▪ Berthing arrangements to explore vessel scheduling and movements during SDW remediation work; ▪ Ship scheduling for Swanson to enable efficient operations. Communication protocol process with VTS; and ▪ Consideration of vessel restrictions and limitations at different project stages. In advance of the workshop, attendees were provided with: VTS Berthing Information, Swanson Dock West - Construction Staging Maps, and Mooring Lines - Workzones - Sketches.	6 June 2021 workshop by VPCM, McConnell Dowell, PoM – 11 attendees
Direct engagement with DP World as the affected terminal operator	Ongoing engagement in person and via correspondence to collaborate on work delivery decisions aimed at: ▪ Minimising the impact on terminal operations, in the context of increasing vessel size and potential for congestion; ▪ Avoid the risks of structural deterioration and the need to downgrade wharf load capacity impacting the terminal's ability to operate as intended; and ▪ Eliminating the need for future works and major maintenance disruption.	Numerous meetings, calls, and correspondences
Industry updates	Bi-monthly stakeholder updates included details of the status of this project.	Ad hoc and bi-monthly from January

How PoM considered feedback

Consistent with our works governance process, PoM regularly convened a SDW Project Control Group (SDW PCG) to consider project updates and stakeholder feedback in its options for the scope and timing of the project and its delivery.

The SDW PCG met monthly since April 2021 (excluding January 2022). It considered feedback predominantly from ongoing consultation with DP World as they are the most affected stakeholder. Key items considered and factored into the project have been:

- Minimising project footprint (site offices and laydown areas) within DP World terminal yard to minimise impacts on DP World's operations based on feedback from DP World;
- Explored various remediation staging scenarios and sought DP World feedback on preferred approach balancing schedule, cost and operational impacts during the remediation works;
- Continued optimisation of design scope and schedule to minimise operational impacts based on DP World feedback; and
- Ensuring the award of the design and early contractor involvement (ECI) tenders was consistent with DP World expectations of suppliers who have significant experience of major remediation projects within international container terminals.

PoM's proposal for a 3-stage work program was questioned by DP World, who requested PoM review the program and see if further smaller stages of work could be undertaken to maximise available quay line during the remediation works. While the alternative option limited the operational impact to DP World during the works, PoM identifies that it would increase the works program from 4.5-5 years to 8-9 years and significantly increase costs. In acknowledgement of the urgent requirement to undertake the remediation DP World and PoM ultimately agreed to revert back to PoM's original 3-stage program and agreed to work collaboratively on the access agreement to allow works to commence expeditiously.

4.6.2 Port Rail Transformation Project – Execution Stage

The PRTP will see more containers moved by rail more efficiently, by-passing roads in inner Melbourne. The project will increase rail terminal capacity and improve rail terminal operations. To fund the project, the Victorian Government varied the Pricing Order that governs tariffs on container imports resulting in an increase in the tariff on full import containers to fund the works.

The need for the PRTP was consulted on and included in our Rail Access Strategy, PDS and PDS Delivery Program according to the following phases:

Pre-approval, negotiation of leases and funding phase (2017 – 2021)

PoM consulted extensively with industry and other stakeholders to develop the PRTP project, commencing with problem definition in 2017 through to the project development and delivery stage.

Early Works and Construction phase (Commenced September 2021)

Early works and the construction of a new rail terminal and associated works commenced in September 2021 with a conclusion deadline of May 2023.

This timeline means that during the period leading up to this 2022-23 TCS, consultation was on the works delivery phase of the project. Table 13 summarises how we engaged, with whom and on what.

Table 13 Summary of engagement – PRTP

Channel	Content covered	Instances
Project consultative committee (PCC)	The objective of this monthly forum with Patrick Terminals was to provide project status updates and, identify and discuss key issues, risks and opportunities to ensure the obligations of the Development Deed are met. Content covered a broad range of works delivery and service disruption minimisation issues.	PCC meetings have been held monthly (other than January) since late 2020. Attended by Patrick and PoM, minuted, with agendas/papers circulated in advance.
Individual stakeholder engagement meetings	The objectives were to: ▪ Provide an overview of the PRTP to ensure appropriate stakeholder engagement; ▪ Enable information sharing and collaboration to meet the PRTP objectives with minimal impact on the relevant stakeholder's operations; and ▪ Support timely provision of relevant planning approvals and authorisations. Meetings were attended by PoM and its project contractors WSP and Seymour Whyte Constructions.	Sessions were held with: ▪ VicRoads / Department of Transport 5 March 2021 ▪ Australian Border Force 3 March 2021 ▪ West Gate Tunnel Project (WGTP) bi-monthly coordination sessions
Tenant notifications	PoM provided timely tenant notifications for each instance of work disruption. These letters covered: ▪ The nature of the work being carried out; ▪ Site maps/aerial images annotated with the affected locations and activities; ▪ Dates of disruptions; ▪ Measures to manage disruptions; and ▪ Contact details for further information.	To date, 14 of these have been issued across a range of tenants.

Channel	Content covered	Instances
Industry updates	Our Bi-monthly stakeholder updates included details of the status of this project.	Ad hoc and Bi-Monthly from January 2022

How PoM considered feedback

Consistent with our works governance process, PoM regularly convened a PCG to consider project updates and stakeholder feedback on its options for the scope and timing of the project and its delivery. Stakeholder feedback and requests were fed into and responded to via this governance forum.

The board also received monthly PRTP infrastructure delivery reports that had a standing item for updates on stakeholder engagement and measures taken in response to feedback.

When considering feedback from consultation with affected stakeholders via this periodic reporting and other project materials, PoM agreed actions in response to these. Responses included, among other things:

- Commissioning additional traffic modelling to address a stevedore’s concerns about traffic flows;
- De-scoping non-core elements of the Appleton Dock works; and
- Engaging an independent certifier.

In addition to the above project governance arrangements for considering and responding to stakeholder feedback, key PoM resources were also assigned specific engagement responsibilities and empowered with relevant delegations to address day-to-day responses to stakeholder requests and feedback.

4.6.3 Webb Dock East Berth Extension – Execution Stage

We consulted on the Webb Dock East Berth Extension project in our PDS and during the 2021 Industry Consultation in April 2021, and had regard to the views of Port Users in the May 2021 decision to include forecast capital expenditure in the 2021-22 TCS.

During the 2021 Industry engagement process, PoM sought feedback on the need, timing, scope and options for funding the investment.

The decision to proceed with the WDE Extension was made by PoM in July 2021. The decision to proceed was made on the basis that it is consistent with PoM’s stewardship obligations to manage, maintain, operate and develop the Port consistent with Port Lessor’s Port Objective for the Port to be a major seaborne trade gateway to the benefit of the economy of the State.

In making the decision, PoM had regard to, among other things:

- Feedback from Port Users on the WDE Extension from the 2021 Industry consultation; and
- Additional feedback from, and engagement with, stakeholders (VICT, Patrick, DP World and ANL) following the 2021 Industry consultation meetings.

Subsequently, PoM has continued to engage with affected stakeholders on the delivery of this project via the channels described in Table 14, below.

This project is currently the subject of litigation by Patrick and a section 49Q compliant investigation with the ESC. Interested stakeholders can continue to stay up to date with this project via our website.

Table 14 Summary of engagement – Webb Dock East Berth Extension

Channel	Content covered	Instances
Notification to industry of the WDE decision	Notification to industry of the WDE decision: ▪ Announcement on decision to proceed with the project and the basis for that decision; and ▪ Noted the engagement that informed the decision. Letters to stakeholders, which: ▪ Notified stakeholders of the decision to proceed and the basis for that decision; and ▪ Reflected the feedback provided by the stakeholder and how PoM had had regard to feedback provided.	Notification to industry 12 August 2021 24 letters to stakeholders that participated in the consultation program sent 12 August 2021
2021 Industry Consultation – feedback to participants	Stakeholder engagement summary – Webb Dock East Extension: ▪ Project context and background; ▪ Summary of consultation program, links to website and TCS General Statement with a detailed summary of what we heard and our response; ▪ Project scope and pricing; and ▪ Feedback received from consultation and decision to proceed with the project.	Stakeholder engagement summary released 12 August 2021
Industry updates	Our stakeholder updates included details of the status of this project. Media release - Port of Melbourne awards contract to boost efficiency at Webb Dock East.	August 2021 and Bi-Monthly from January 2022 Media release 7 March 2022

5 Operating expenditure

5.1 Overview

PoM's prescribed opex forecast for the 2022-23 Regulatory Period is $150.9m (Table 15).

The majority of the forecast is comprised of non-controllable costs – that is, costs that PoM has no control or influence over – being the Port Licence Fee, Cost Contribution Amount, and Port Rail Transformation Agreement (PRTA) costs (foregone rental costs imposed by the PRTA, and which are deemed prudent by the Pricing Order).

This Chapter:

- Describes our actual and forecast opex, historical capital expenditure outcomes, key trends and review of forecast accuracy;
- Provides an overview of PoM's approach to forecasting opex, including key drivers of the forecast; and
- Sets out our base-step-trend calculation, which we use to validate the prudency and efficiency of the opex forecast.

Table 15 Forecast prescribed opex for the 2022-23 Regulatory Period, $ million

Category	2022-23 (F)
Port Licence Fee	90.8
Cost Contribution Amount	17.1
PRTA Costs	4.5
Non-controllable total	**112.4**
Insurance, Rates & Taxes	2.6
Land Tax	-
Labour Costs	15.8
Repairs & Maintenance	3.9
Construction	-
Professional Services	7.2
Security	1.9
Utilities, Admin, Rental & IT	4.9
Non-Recurring	2.3
Controllable total	**38.5**
TOTAL	**150.9**

5.2 Regulatory context

5.2.1 Pricing Order requirements

The Pricing Order sets out the following requirements for operating expenditure:

4.1.1 For the purposes of determining its Aggregate Revenue Requirement, the Port Licence Holder must apply an accrual building block methodology over the Regulatory Period comprising:

c) an allowance to recover its forecast operating expenses, commensurate with that which would be required by a prudent service provider acting efficiently

8.2.1 Information in the nature of an estimate or forecast must be supported by a statement of the basis of the forecast or estimate.

8.2.2 A forecast or estimate:

a) must be arrived at on a reasonable basis; and

b) must represent the best forecast or estimate possible in the circumstances.

5.2.2 ESC Pricing Order compliance inquiry

In its inquiry into PoM's compliance with the Pricing Order, the key findings of the ESC in relation to operating expenditure were as follows:

- PoM did not comply with 4.1.1(c) because it has not demonstrated that its approach to establishing total opex for the review period is prudent and efficient;[43]
- The opex forecasts for 2019-20 and 2020-21 did not comply with clause 8.2.2(a) and (b);[44]
- PoM's non-compliance is sustained because its approach to forecasting and governance processes remained consistent over the review period;[45] and
- The non-compliance is not significant because PoM's forecasts do not have a material impact on Port Users over the review period.[46]

5.2.3 PoM's response to the ESC findings

Following the release of the ESC's final report, PoM engaged Deloitte Access Economics (Deloitte) to assist with responding to, and complying with, the findings and recommendations in the ESC's final report on operating expenditure, cost allocation and capital expenditure.[47] Deloitte's advice also extended to addressing observations from the ESC's expenditure consultant, FTI Consulting (FTI).

Table 16 below summarises Deloitte's recommendations in relation to operating expenditure and PoM's actions in response. Deloitte also set out a suggested timeline for these actions, noting that some are higher priority than others and that it will not be possible for all of the actions to be completed in time for submission of the 2022-23 TCS. Some actions already undertaken pre-dated the release of the ESC's final report, though were outside the review period and so not considered in the ESC's inquiry.

[43] ESC*, Inquiry into the Port of Melbourne compliance with the Pricing Order: Final Report,* 31 December 2021, p.83
[44] ESC*, Inquiry into the Port of Melbourne compliance with the Pricing Order: Final Report,* 31 December 2021, p.90
[45] ESC*, Inquiry into the Port of Melbourne compliance with the Pricing Order: Final Report,* 31 December 2021, p.83
[46] ESC*, Inquiry into the Port of Melbourne compliance with the Pricing Order: Final Report,* 31 December 2021, p.83
[47] Deloitte Access Economics, *Complying with ESC regulatory requirements*, March 2022

Table 16 Deloitte recommended compliance actions – Opex

Issue	Deloitte recommendations	PoM actions
Review of forecast versus actual costs	The 2022-23 TCS needs to demonstrate that PoM has reviewed the difference between forecast and actual opex for 2020-21 (and an estimate for 2021-22), examined the reason for the differences, and applied any changes to the forecast methodology that appear necessary.	We have reviewed opex forecasting accuracy for the previous review period and implemented changes to improve accuracy going forward, which include the adoption of independent, external forecasts of wage and construction cost increases.
Efficiency targets and forecasting process – base-step-trend	PoM needs to use a 'first cut' base-step-trend approach (including a productivity factor) as part of its process for compiling opex forecasts in its 2022-23 TCS. Given the timeframes, we consider it reasonable for this first use of 'base-step-trend' to be refined and updated for the 2023-24 TCS. Work to understand the relationship between opex and demand should commence following submission of the 2022-23 TCS and should inform the 2023-24 TCS.	A first cut of base-step-trend approach has been developed, including: ▪ A productivity growth target of 0.5% for Prescribed Services opex; and ▪ An initial assessment of the relationship between opex and key cost drivers (demand and capital growth). The base-step-trend was then compared to the bottom-up forecast to inform efficiency of the forecast. Following submission of the 2022-23 TCS we will undertake further work to build on our understanding of the relationship between opex and growth to inform the 2023-24 TCS.
Forecasting process – bottom-up forecasts	Teams preparing the bottom-up forecasts should be provided with material on: ▪ Historical cost and forecasts; ▪ Overarching assumptions including productivity; and ▪ Relevant benchmark cost information Teams should be required to explicitly document key assumptions. Opex forecasts should be subject to a formal and rigorous challenge process by both senior management and the Board as part of the 2022-23 TCS.	The bottom-up forecast approach has been enhanced via: ▪ Adoption of a growth-adjusted CPI cap on cost increases for total opex; ▪ Additional guidance material provided to teams preparing the forecasts, including an expectation to identify efficiency savings; and ▪ Forecasts have been challenged by senior management, shareholders and the Board.

Issue	Deloitte recommendations	PoM actions
Benchmarking and labour costs	PoM should undertake work to consider how it can best benchmark its opex with other businesses and how these benchmarks can feed into its opex forecasting process. This should commence following submission of the 2022-23 TCS and this benchmarking should inform the 2023-24 TCS. The 2022-23 TCS should include forecasts of FTEs and clear justification for changes in total labour costs, average labour costs and FTEs.	Actions to review and benchmark labour costs, including: ▪ Development of a 5-year workforce plan; ▪ Benchmarking labour force against another capital city port; ▪ Benchmarked remuneration for executive and key roles; and ▪ A proposal to share port data for workforce benchmarking.

5.3 Actual and forecast operating expenditure

5.3.1 Prescribed services opex

Table 17 shows our Prescribed Services opex from the beginning of the Port Lease in 2016-17 to 2022-23 by category. Key trends in opex over the Port Lease include:

- Total controllable costs have followed a downward and then upward trend, and are forecast to be marginally higher in 2022-23 than in the first year post privatisation;
- Insurance costs have more than doubled, driven by increasing premiums in a hardening insurance market;
- Labour costs, after material reductions in the transition to private operations, have trended upwards as the business faces growing demand and increasing costs relating to the delivery of our legislative, regulatory and contractual obligations. Professional services costs have been similarly impacted (‘construction’ in 2016-17 was primarily contractor expense); and
- Repairs and maintenance costs have trended downwards.

Details on the key drivers of 2022-23 forecast opex are set out in section 5.4.2 below.

Table 17 Prescribed Services Opex by category, 2017-18 to 2022-23, $ million

Category	2017-18 (A)	2017-18 (A)	2018-19 (A)	2019-20 (A)	2020-21 (A)	2021-22 (F)	2022-23 (F)
Port Licence Fee	81.3	82.5	84.4	86.3	87.6	88.7	90.8
Cost Contribution Amount	15.0	15.3	15.6	15.9	15.9	16.4	17.1
PRTA Costs	-	-	-	0.3	4.3	4.3	4.5
Non-controllable total	**96.3**	**97.8**	**100.0**	**102.5**	**107.8**	**109.4**	**112.4**
Insurance, Rates & Taxes	1.1	1.1	1.1	1.2	1.5	1.9	2.6
Land Tax	-	-	-	-	-	-	-
Labour Costs	13.2	11.1	7.7	8.6	12.3	15.9	15.8
Repairs & Maintenance	6.6	4.5	4.1	3.2	4.4	4.2	3.9
Construction	3.3	-	-	-	-	-	-
Professional Services	2.8	3.7	4.6	4.0	4.5	6.4	7.2
Security	2.3	2.1	1.7	1.6	1.6	1.8	1.9
Utilities, Admin, Rental & IT	5.9	5.0	4.5	4.4	4.6	5.4	4.9
Non-Recurring	2.5	2.9	0.4	0.5	0.7	1.0	2.3
Controllable total	**37.7**	**30.4**	**24.1**	**23.5**	**29.6**	**36.5**	**38.5**
TOTAL	**134.0**	**128.2**	**124.1**	**126.0**	**137.4**	**145.9**	**150.9**

Review of forecast accuracy

In this section we summarise the results of our analysis of the accuracy of historical forecasts. Table 18 sets out the difference between forecast and actual opex by category. A positive value in the table indicates under-spend compared to forecast (actuals lower than forecast) and a negative value indicates over-spend compared to forecast (actuals higher than forecast). Forecast opex was higher than actual opex from 2017-18 to 2019-20, but the reverse was the case in 2020-21.

Table 18 Forecast less actual controllable prescribed opex, $m nominal

Opex category	2017-18	2018-19	2019-20	2020-21
Insurance, Rates & Taxes	-0.2	0.0	0.0	0.0
Labour Costs	-1.5	2.2	1.0	-1.0
Repairs & Maintenance	1.2	-0.1	0.5	-1.0
Construction	0.0	0.0	0.0	0.0
Professional Services	-0.1	-0.6	-0.2	-0.2
Security	0.0	0.4	0.3	0.1
Utilities, Admin, Rental & IT	1.0	0.9	0.3	0.0

Opex category	2017-18	2018-19	2019-20	2020-21
Non-Recurring	-0.3	0.8	0.9	-0.7
Total forecast error ($m)	**0.2**	**3.6**	**2.8**	**-2.8**
Total forecast error (%)	**0.5%**	**13.1%**	**10.7%**	**-10.5%**
Excluding non-recurring costs:				
Total forecast error ($m)	**0.5**	**2.8**	**1.9**	**-2.1**
Total forecast error (%)	**1.8%**	**10.6%**	**7.6%**	**-7.8%**

Source: Appendix Q – Opex analysis models
Note: Prior to the 2022-23 TCS, PRTA costs were included within the 'Insurance, Rates & Taxes' and 'Utilities, Admin, Rental & IT' categories. These costs are excluded from this table because they are non-controllable. Actual opex data has been adjusted for corrections to cost allocations (see section 6.2.1) but forecasts are unadjusted. These corrections contribute to the forecast error.

In considering the level of historical forecast error, we make the following observations:

- There does not appear to be a persistent trend in forecasting error, either at a total controllable prescribed opex level, or within individual opex categories;
- In relation to deviations from forecast in the most recent year of actual data available (2020-21) the following reasons for over/under forecast have been identified:
  - Labour: capitalisation of labour costs was lower than forecast ($1.8m) due to capital project delays, though this was moderated by lower than forecast salary costs;
  - Asset maintenance: actual costs were $1m over budget due to an abnormal level of unplanned reactive maintenance, with the largest components being the removal of historical bunker berths for public safety reasons and repair for Webb Dock rock wall following storm damage;
  - Professional services: actual costs were $0.2m over forecast, largely due to higher than expected spend on regulatory compliance and corporate relations / engagement; and
  - Non-recurring costs: under-forecast due to unexpected stamp duty payments to the Queensland Office of State Revenue.

Since the commencement of the Port Lease, the most material forecast errors relate to labour costs and repairs and maintenance. We have made the following adjustments to forecasting to improve the approach for these items:

- For labour, we have adopted an independent, external forecast of the Victorian Wage Price Index (WPI) for forecasting costs. [redacted]
- For repairs and maintenance, we have adopted an independent, external forecast of the construction cost index for forecasting costs. [redacted]

These changes are in addition to the broader enhancements to our forecasting approach discussed in the following sections.

5.4 Opex forecasting method

5.4.1 Budget process and forecast

Overview of process

The steps in developing the opex forecast is part of the annual budget setting process, and was similar to the approach applied in previous years, as described in the table below.

The budget setting process occurs over a 3-4 month timeframe, over the course of which there are numerous revisions and adjustments, with forecasts challenged by the Finance Division, CFO, Executive (via the Investment Review Committee), shareholders and Board.

Table 19 Key stages of forecast development and challenge process

Stage	Internal review and challenge process	Timing
Budget kick-off meeting	▪ Kick off meeting with shareholder working group to discuss key issues, assumptions and timeframes.	February
Divisional inputs	▪ Bottom-up development of budget forecasts at the divisional level.	February-March
Management review of divisional forecasts	This is an iterative process of working with the Executive General Managers of each division to investigate key cost movements, and includes: ▪ Finance and Regulatory review of forecasts by responsibility centre and division; ▪ CFO review of forecasts by responsibility centre and division; and ▪ Engagement with CEO and Executive Leadership Team on proposals and key cost movements (including via the IRC).	March
First draft of budget to shareholders	▪ The first consolidated Budget pack is developed circulated to shareholders for challenge and comment. ▪ Issues log to receive and respond to comments. ▪ Workshop is held with shareholders to discuss.	March-April
Second draft of budget pack to shareholders	▪ Second draft addressing the issues raised by the Shareholders is presented for any further and final comments.	April
Budget papers finalised and provided to the Board	▪ Budget papers are required 1-2 weeks prior to the Board meeting.	May
Budget considered by the Board	▪ It is a business requirement that at least 30 days prior to the commencement of each financial year, Management prepares and submits to the Board the following a draft Business Plan; and a detailed draft Budget for the PoM Group for the next 5 financial year period. ▪ The Board may request further changes to the budget.	May

Enhancements to this year's forecasting process

The following enhancements were made to the forecasting approach for this year's budget and TCS:

- Guidance on the ESC's and FTI's findings on expenditure was provided to the Responsibility Centre owners developing the expenditure forecasts to address issues raised by the ESC and its consultants;[48]
- Articulation and application of explicit, short-term targets for productivity and efficiency, as follows:
  - For total opex, the bottom-up forecast has been developed to a target cap cost increases at no more than growth-adjusted CPI; and

[redacted]

– Comparison to a base-step-trend calculation (focussing on prescribed, controllable opex), which was developed concurrently with the bottom-up forecast.

We have also included more detail in this TCS on cost drivers and changes in costs. In its final report to the ESC, FTI noted the following areas for improvement in PoM's opex forecasts:[49]

…there has been very limited reference or explanation of any known changes in costs in the TCS…

…While we would not expect annual TCS to provide detail down to each underlying cost centre (as we have examined in this review), we would expect the Port of Melbourne to provide an explanation of the key cost drivers in each category…

…The TCS do not disclose whether there have been step changes in any year.

The following sections provide details on the key cost drivers for the 2022-23 TCS. These key cost drivers are aligned to the step changes identified and applied under the base-step-trend approach described in section 5.5.

5.4.2 Key drivers of the forecast

Key cost drivers of our opex forecast for the 2022-23 Regulatory Period include:

- Growth in demand for services;
- Labour costs;
- Rising insurance premiums;
- Regulatory compliance and stakeholder engagement; and
- Non-recurring costs.

Descriptions of each of these drivers are provided in the sections that follow. As 2020-21 is the last year of actual data, changes in costs are described relative to this year. Unless otherwise indicated, the figures below are prescribed, controllable opex.

Growth in demand for services

As activity at the port increases, operating costs grow in order to meet stakeholder expectations around engagement, comply with our regulatory and legislative obligations, and operate the port in accordance with the Good Operating Practice requirements of the Port Lease.

In accordance with the recommendations from Deloitte described in Table 16, to inform the 2023-24 TCS we will undertake further analysis on the growth component and the relationship between demand, capex and opex following the submission of the 2022-23 TCS.

In section 5.5, below, we provide a high-level, top-down quantification of the extent to which growth in the provision of services (as represented by increased throughput and investment in infrastructure for the provision of Prescribed Services) is expected to affect our operating costs.

Labour costs

The following step changes in prescribed labour costs, between the last year of actuals (2020-21) and the 2022-23 regulatory year, have been identified:

- [redacted]
- [redacted]
- [redacted]

In this section, we discuss our review and benchmarking of labour costs.

[49] FTI Consulting, *Review of Port of Melbourne's cost allocation, demand and expenditure - Final Report*, November 2021, p.34

Strategic review of labour requirements – 5-Year Workforce Plan

PoM regularly reviews current and emerging workforce requirements via quarterly corporate structure update reports to the People and Culture Committee. The February 2021 update identified a number of key themes having an impact on PoM's workforce including:

- Regulation – increasing regulatory governance and reporting;
- Sustainability – new strategies and sustainability reporting framework driving workload and future resourcing requirements
- Corporate relations – connected to regulation and engagement on port development; and
- Cyber security – increased threat of cyber-attacks and the implementation of *the Security of Critical Infrastructure Act 2018* (SOCI) in 2022.[50]

In June 2021, PoM commissioned an internal audit of its workforce planning framework by Deloitte Touche Tohmatsu. The overall assessment from the audit was a Satisfactory rating, with minor recommendations which fed into process improvements and the development of a 5-Year Workforce Plan to as outlined below. Among its findings, Deloitte noted that PoM's linking of future workforce needs to the strategic goals of the organisation provides a robust basis by which to identify and plan for the capabilities and financial resources required to ensure PoM is sufficiently supported to achieve its short, medium and longer term objectives.[51]

In late 2021 and early 2022, consistent with the findings and recommendations of the internal audit, PoM developed a 5-Year Workforce Plan as part of a review of future workforce needs to better understand what is required to build, develop and prepare our workforce for the future, and make long-term, strategic workforce decisions.

The objectives of the Workforce Plan were to:

- Understand the resources required now and in the future;
- Identify workforce capability gaps in areas crucial to delivering our strategic objectives; and
- Identify actions to help build, develop, and prepare our workforce for the future.

[redacted]

Benchmarking and analysis of labour costs

As noted above, Deloitte recommended that following the 2022-23 TCS, PoM undertake work to benchmark its opex with other businesses to feed into the forecasting process. Noting the difficulty in finding relevant comparators, we will progress this benchmarking work in the second half of 2022. In the meantime, in preparing and assessing forecast 2022-23 labour costs for prudency and efficiency, we have drawn on a range of recent benchmarking conducted in relation a number of aspects of our labour costs.

[redacted]

- [redacted]
    - [redacted]
    - [redacted]
    - [redacted]

[redacted]

[51] Deloitte Touche Tohmatsu, *Internal Audit of Workplace Planning Framework*, June 2021

- [redacted]
  - [redacted]
  - [redacted]
    - [redacted]
    - [redacted]
- [redacted]

[redacted]

[redacted]

- [redacted]
- [redacted]

[redacted]

Rising insurance premiums

[redacted]

[redacted]

Regulatory compliance and stakeholder engagement

As noted above, resourcing challenges in the areas of regulatory compliance and engagement have been identified by PoM going back to corporate structure updates in early 2021. [redacted]

[redacted]

- [redacted]
- [redacted]

The outcomes of the ESC inquiry have contributed to PoM's decision to invest in additional resources and systems to address the findings and enhance regulatory compliance capabilities.

[redacted]

- [redacted]
- [redacted]

Information Technology

[redacted]

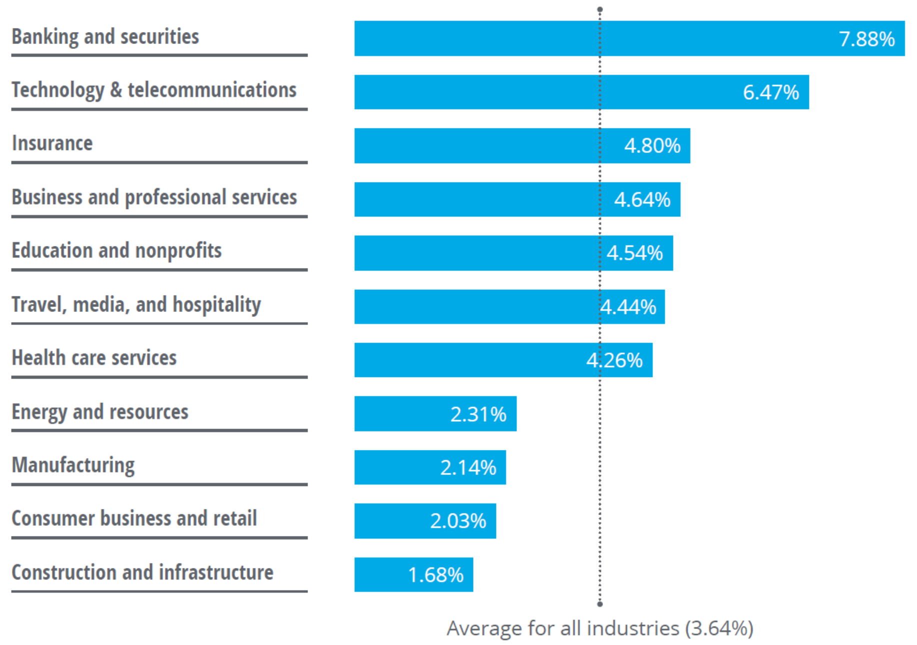
- [redacted]
- [redacted]
- [redacted]

[redacted]

By comparison, the average IT budget as a proportion of revenue for companies in construction and infrastructure is 1.68% (see Figure 8).

[53] GHD, Port of Melbourne 2022 Industry Consultation – recommendations paper, May 2022

Figure 8 Average IT budget as a percentage of revenue



Source: Deloitte, CIO Insider, January 2020

Non-recurring costs

In identifying non-recurring costs we have identified material cost items that are driven by a once-off regulatory or business requirement and are not deemed to be part of business as usual activities. Where costs are for a unique activity, but relate to a business as usual function, we have not sought to recognise them separately as step-changes or non-recurring costs. This recognises that in any one year there will be a number of periodic costs that are incurred, or not incurred, which are part of a normal business as usual cycle of activity.

[redacted]

As these costs are outside of the normal course of business, we have isolated them from the underlying cost base. Given that they are not expected to continue into future years, they will not form part of the baseline going forward.

5.5 Base-step-trend calculation

In response to the ESC's findings and to improve our opex forecasts, for this TCS we have augmented our bottom-up forecasting approach with a 'base-step-trend' calculation to ensure the bottom-up forecasts are prudent and efficient.

The base-step-trend approach involves:

- Establishing an efficient and prudent level of costs in a 'base year', by taking actual costs in the most recent regulatory year, and adjusting for any one-off factors that are unlikely to occur going forward;
- An annual 'trend', which reflects both: (1) a growth factor; and (2) an efficiency factor; and
- Adding or subtracting any one-off and material upward or downward 'steps' in opex, including changes in regulatory requirements, or any other significant impacts on costs.

PoM is still in the process of achieving a steady state of operations, particularly given the need to take action to address the ESC's findings. As noted by FTI:[54]

> *…the Port of Melbourne has not experienced a 'steady state' in operations over the last five years. This has implications both for the stability of its operating and capital expenditure programs and the nature of costs incurred. It also means that traditional approaches used to assess prudency and efficiency of expenditure, such as benchmarking and the 'base-step-trend' approach, have more limited value in this first review period.*
>
> *We expect that the Port of Melbourne should move to a steady state of operations over the next review period, and this will enable a more definitive view to be taken about the prudency and efficiency of its expenditure in future.*

As such, and given this is the first time a base-step-trend calculation has been applied by PoM (or in the Australian ports sector), we have retained the bottom-up approach as the key forecasting tool for this TCS. The outcome of the base-step-trend calculation will be compared to the bottom-up approach, so that adjustments can be made to the forecast adopted for the TCS where appropriate to address a material inconsistency between the bottom-up forecasts and the base-step-trend calculation. We expect to continue to refine the base-step-trend approach in preparation for the 2023-24 TCS.

Base year

The starting point for the base is actual prescribed controllable opex in the most recent year for which data is available, which in this case is 2020-21. Total prescribed opex in 2020-21 was $146.01m.

Removing non-controllable expenditure related to the Port Licence Fee, Cost Contribution Amount and PRTA ($114.56m in total), results in an un-adjusted baseline total prescribed controllable opex of $31.45m.

We then made a downwards adjustment of $0.76m to the base year to reflect non-recurring costs (as defined in the budget). These costs include:

- [redacted]
- [redacted]
- [redacted]

The same adjustment is also made to forecast opex for 2022-23, where costs defined as non-recurring in the budget are netted off the bottom-up forecast for the purpose of comparison to the base-step-trend forecast.

We also note that 2020-21 was affected by COVID-19. While we have identified some changes in costs due to COVID (e.g. lower travel costs, higher IT costs), the net impact of COVID-19 is difficult to isolate, so we have not made any adjustments for COVID-19 related costs in the base year.

The above adjustments result in a base year prescribed controllable opex of $30.69m.

Trend – growth and efficiency

The trend component consists of both a growth and efficiency trend. Both trends are rolled over into 2021-22 and then 2022-23 (i.e. two years of trend are calculated).

Growth

In estimating the growth component of the trend, we have undertaken a high-level review of the drivers of opex to arrive at an estimate of an appropriate factor for this TCS:

- We consider that the majority of opex is likely to have some relationship to growth in the provision of infrastructure and demand for services, as represented by:

[54] FTI Consulting, *Review of Port of Melbourne's cost allocation, demand and expenditure - Final Report*, November 2021, p.iii

  - Growth in containers (demand) – import full containers are the key trade that drives investment in the port. Average annual growth in import containers for the second review period (i.e. until 2026-27) is forecast by BISOE to be 2.3%;
  - Growth in the asset base (RAB) – average annual growth in the asset base during the first regulatory period was 3.5%. The size of the RAB influences costs including maintenance and insurance; and
- We also recognise that some costs are likely to have limited relationship with demand or the RAB, or be fixed, such as some labour costs and security costs.

We calculated a weighted average of the above growth rates for opex, based on our expectations of how each driver might impact the major categories of opex. Weightings were based on 2020-21 actual costs, resulting in a weighted average of 2.3%.

Table 20 Weighted average growth rate

Opex category	Driver	FY21 opex	Weight	Comment
Insurance, Rates & Taxes	RAB	$1.58m	5.0%	Insurance costs are expected to move in line with the size of asset base.
Labour Costs	Demand (80%)	$13.06m	41.5%	FTE levels are expected to be related to the level of activity at the port. Recognising that there is likely to be a fixed component of labour costs, we apply a discount of 20% to the growth rate.
Repairs & Maintenance	RAB	$4.64m	14.8%	R&M costs are expected to move in line with the size of asset base.
Professional Services	Demand	$4.75m	15.1%	Related to the level of activity at the port.
Security	Demand (80%)	$1.75m	5.6%	Security needs are generally linked to throughput. Recognising that there is likely to be a fixed component, we apply a discount of 20% to the growth rate.
Utilities, Admin, Rental & IT	Demand	$4.90m	15.6%	Utilities are expected to be related to the level of activity at the port.

Source: Appendix Q – Opex analysis models

Having regard to the container growth forecast, recent growth in the asset base, and weighted average of growth rates for key opex categories, we consider that a growth trend component of 2.3% is reasonable for the 2022-23 TCS.

As recommended by Deloitte, to inform the 2023-24 TCS we will undertake further analysis on the growth component and the relationship between demand, capex and opex following the submission of the 2022-23 TCS.

Efficiency benchmark

In establishing an efficiency benchmark, we have drawn on estimates of economy-wide multi-factor productivity published by the ABS:

- Over the last decade, the ABS's estimates of multifactor productivity growth ranged from -0.60% to 1.10%, with an average of 0.66%; and
- Productivity growth in recent years has been relatively low, 0.00% in 2018-19, 0.10% in 2019-20 and 0.20% in 2020-21.[55]

[55] Australian Bureau of Statistics, Estimates of Industry Multifactor Productivity 2020-21 financial year

We have also considered the following contextual factors:

- As noted above, PoM is still in the process of achieving a steady state of operations, including the need to take action to address the ESC's findings in its inquiry;
- Certain drivers of economy-wide productivity (e.g. technology change and opportunities for capital substitution) are likely to be less available for a landlord port;
- Material opex efficiencies were achieved in the first review period, which might limit opportunities for efficiency in the near term. In the last review period, PoM achieved:
  - A 41% reduction in average controllable opex from the pre-lease average; and
  - A 23% reduction on controllable opex from the first year to the last year of the review period.

Having regard to the above, we consider that an efficiency assumption of 0.5% per annum is reasonable for the 2022-23 TCS.

Step changes

The step changes reflect the cost impact of material changes in circumstances compared to the base year. As noted in section 5.4.2, we have identified the following step changes in expenditure for 2022-23:

- [redacted]
- [redacted]
- [redacted]
- [redacted]

Combined, these steps result in a $5.51m (17%) increase in prescribed controllable costs in 2022-23 above the trended baseline.

[redacted]

Summary of the base-step-trend calculation

The table below summarises the base-step-trend calculation.

Table 21 Base-step-trend calculation, $2022 million

	2020-21	2021-22	2022-23
Base year – prescribed opex	**146.01**		
Non-controllable opex			
Port Licence Fee	93.13		
Cost Contribution Amount	16.85		
PRTA Costs	4.58		
Base year – prescribed controllable opex	**31.45**		
Adjustments for non-recurring items	0.76		
Trend adjusted baseline opex	**30.69**	**31.24**	**31.80**
Add Step change adjustments:			
[redacted]			[redacted]
[redacted]			[redacted]
[redacted]			[redacted]
[redacted]			[redacted]

	2020-21	2021-22	2022-23
Base-step-trend controllable operating expenditure			**37.31**
Adjustment for non-recurring items			2.34
Total base-step-trend controllable operating expenditure			**39.64**

Source: Appendix Q

5.5.1 Comparison of opex forecast to the base-step-trend calculation

Table 22 and Figure 9 below provides a comparison of the base-step-trend to the bottom-up forecast. As shown, the bottom-up forecast is $1.12m below the base-step-trend calculation.

Noting that the bottom-up forecast is broadly in line with (though somewhat below) the base-step-trend calculation, we consider that this provides validation of the bottom-up forecasts as a prudent and efficient forecast for opex for the 2022-23 regulatory year.

Table 22 Comparison of base-step-trend to bottom-up forecast, $2022 million

	2020-21	2021-22	2022-23
Base year – prescribed controllable opex	**31.45**		
Adjustments for non-recurring items	0.76		
Trend adjusted baseline opex	**30.69**	**31.24**	**31.80**
Total step changes			5.51
Base-step-trend controllable operating expenditure			**37.31**
Adjustment for non-recurring items			2.34
Total base-step-trend controllable operating expenditure			**39.64**
Bottom-up forecast controllable operating expenditure			**38.52**
Comparison to base-step-trend			-1.12

Source: Appendix Q

Figure 9 Comparison of base-step-trend to bottom-up forecast, $2022 million

[redacted]

6 Cost allocation

6.1 Regulatory context

6.1.1 Pricing Order requirements

The Pricing Order sets out the following requirements for cost allocation:

5.1.1 The objective of the Cost Allocation Principles is to provide a transparent and consistent methodology for allocating and monitoring costs for the purpose of setting Prescribed Service Tariffs.

5.2.1 Costs of the Port Licence Holder must be allocated between Prescribed Services and all other services provided by the Port Licence Holder in a manner consistent with the following cost allocation principles:

a) costs that are directly attributable to the provision of the Prescribed Service must be attributed to that Prescribed Service; and

b) costs that are not directly attributable to the provision of the Prescribed Service but which are incurred in the course of providing both one or more Prescribed Services and other services must be allocated to the Prescribed Service on the basis of its share of total revenue from all services provided by the Port Licence Holder

6.1.2 ESC Pricing Order compliance inquiry

In its final report on its first inquiry into PoM's compliance with the Pricing Order, the ESC made a finding of sustained, but not significant, non-compliance in relation to cost allocation.

The ESC found that:

- Road and rail asset costs unrelated to the Port Rail Transformation Agreement had not been allocated correctly, which the ESC considered to be non-compliant with clause 5.2.1[56]; and
- PoM did not allocate all rail asset costs related to the Port Rail Transformation Agreement to tariffs for the 'full-inward' wharfage fee (as required by clause 2.1.6 of the Pricing Order). The ESC considered this to be not compliant with clause 5.2.1.[57]

The ESC noted its expectation for PoM to be able to ring-fence costs incurred under the Port Rail Transformation Agreement from other rail costs for future price setting.[58]

6.2 Updates to cost allocation governance and approach

We have corrected the cost allocation issues raised by the ESC in the Regulatory Model.

We have improves our cost allocation processes and developed a Regulatory Cost Allocation Guideline, which includes a process for annual reviews of cost allocation to ensure compliance.

[56] ESC, *Inquiry into the Port of Melbourne compliance with the Pricing Order: Final Report,* 31 December 2021, pp.102, 196
[57] ESC, *Inquiry into the Port of Melbourne compliance with the Pricing Order: Final Report,* 31 December 2021, p.196
[58] ESC, *Inquiry into the Port of Melbourne compliance with the Pricing Order: Final Report,* 31 December 2021, p.102

6.2.1 Corrections to cost allocation

We have made a number of amendments to the Regulatory Model to address cost allocation issues for PRTA and other rail costs, plus a small number of other allocation issues identified through our annual review. These adjustments are described in further detail in Appendix D.

While, these allocation issues had no impact on Port Users during the review period due to the operation of the TAL, some of the revisions do have a minor impact on the capital base. The net impact of the revisions is to reduce the closing capital base for 2019-20 by $4.3m (primarily due to recognition of $3.3m in capital contributions), which is a 0.1% reduction in the closing capital base originally calculated.

Table 23 Model adjustments to address cost allocation issues

Issue	Action taken by PoM	Impact on Port Users
Allocation of PRTA capex	**Creation of a new asset class for PRTA** In order to separate out PRTA capex from other rail capex, the asset class 'Rail' has been separated into 'Port Rail Transformation Agreement' and 'Other Rail'. Allocations to Prescribed Services have been updated with PRTA capex allocated exclusively to 'full – inward' wharfage fees. Both asset classes maintain the same asset life of 30 years.	None. Prescribed service allocators affect efficient cost bounds only. All Prescribed Services remain within the efficient cost bounds.
Allocation of PRTA opex	**Creation of a new opex category for PRTA** Forgone rent related to the PRTA was incorrectly allocated as 'shared' instead of 'prescribed'. In order to more transparently present PRTA costs, a separate opex category has been created called 'PRTA Costs'. PRTA costs originally classified under Insurance, Rates & Taxes and Utilities, Admin, Rental & IT have been reclassified. All costs are allocated to containerised full inward wharfage fees. A small amount of actual opex for PRTA forgone rent in 2019-20 that was originally allocated as shared has been reallocated to prescribed.	None. Prescribed opex would have been marginally higher in 2019-20, but due to the operation of the TAL this opex would not have been recovered and the capital base and tariffs would have been unaffected.
Allocation of non-PRTA rail capex	**Reallocation of road and rail costs among Prescribed Services tariffs** PoM incorrectly allocated all road and rail capex to the tariffs for wharf access hire and slipways only. The Road and 'Other Rail' asset class allocators have been revised to cover all wharfage fees and some other relevant fees.	None. Prescribed service allocators affect efficient cost bounds only. All Prescribed Services remain within the efficient cost bounds.
Individual capex project allocations	**Review of capex project allocations** Following the development of the Cost Allocation Guideline PoM undertook a detailed review of allocations of capital projects (including capitalised opex), resulting in small number of reallocations to ensure compliance with the Pricing Order and internal consistency in allocation	The net impact of the reallocations is a marginal reduction in the closing capital base in 2019-20.
Individual opex cost centre allocations	**Review of opex cost centre allocations** Following the development of the Cost Allocation Guideline PoM undertook a detailed review of allocations of each cost centre, resulting in small number of reallocations to ensure compliance with the Pricing Order and internal consistency in allocation.	None. The net impact of these changes is a marginal reduction in PoM's prescribed opex across 2016-17 to 2019 20, but these changes have no impact due to the TAL.

6.2.2 Regulatory Cost Allocation Guideline

To improve our assurance processes for applying the cost allocation principles in the Pricing Order, we have developed a Regulatory Cost Allocation Guideline (Appendix R).

The Cost Allocation Guideline is intended to formalise and document PoM's processes for cost allocation, improve demonstration of compliance with Clause 5 of the Pricing Order, and ensure that costs continue to be captured in an appropriate and accurate manner.

The Cost Allocation Guideline sets out the process and procedure by which PoM allocates costs incurred in accordance with the Pricing Order. It includes:

- Background on Pricing Order requirements for cost allocation;
- A description of PoM's approach to capturing and attributing costs to Prescribed and non-Prescribed Services;
- A description of the key activities required to apply the approach and accountable parties;
- Details of how the Cost Allocation is to be applied including associated compliance monitoring, record keeping and modelling practices; and
- A Schedule containing all Responsibility Centres (cost centres for recording opex) and their attribution to Prescribed Services, non-Prescribed Services, or shared costs. Descriptions of the Responsibility Centres are maintained separately in PoM's Chart of Accounts.

The process and procedure reflect PoM's existing practice, with costs attributed to Prescribed Services or non-Prescribed Services on a causal basis. Costs that cannot be directly attributed are treated as 'shared' costs and allocated across prescribed and non-Prescribed Services based on the share of PoM's relevant revenues as required by the Pricing Order. Operating costs are attributed at the level of Responsibility Centre and capital costs are attributed by capital activity.

The allocation of operating costs is reviewed annually.

The allocation of capital costs is undertaken on a case-by-case basis, at the establishment of the capital project and reviewed at project completion.

The Guideline is subject to review once every two years, or earlier if circumstances require (for example, changes to the Pricing Order or ESC guidance).

7 Trade volumes

7.1 Context and overview

We engaged BIS Oxford Economics (BISOE) to forecast trade volumes for 2022-23. We forecast vessel channel volume data internally by applying historical correlations between ship tonnage and trade volumes to the BISOE trade forecasts, in conjunction with published shipping schedules for the Bass Strait operators and cruise vessels. Volumes for minor items such as hire fees are forecast internally with reference to historical trends and market intelligence.

Appendices K to M provide further detail on our trade volume forecasts for the 2022-23 TCS.

7.1.1 Pricing Order requirements

The Pricing Order sets out the following requirements for forecasts:

> *8.2.1 Information in the nature of an estimate or forecast must be supported by a statement of the basis of the forecast or estimate.*
>
> *8.2.2 A forecast or estimate:*
>
> *a) must be arrived at on a reasonable basis; and*
>
> *b) must represent the best forecast or estimate possible in the circumstances.*
>
> *8.3.1 Information on the nature of an extrapolation of inference must be supported by the primary information on which the extrapolation or inference is based.*

7.1.2 ESC Pricing Order compliance inquiry

In its final report on its first inquiry into PoM's compliance with the Pricing Order, the ESC found that PoM's demand forecasts complied with requirements of clauses 8.2 and 8.3.[59] The ESC considered that PoM's long-term modelling was reasonable and consistent with industry practice, based on reasonable assumptions and that the underlying data was clear.[60] However, the ESC noted some concerns with aspects of PoM's short-term modelling[61] and FTI Consulting's review of demand for the Pricing Order inquiry also made a number of additional suggestions for improvements to PoM's trade forecasting practices.[62]

PoM has considered the ESC and FTI's concerns and suggestions and addressed them as follows:

- BISOE's full forecasting models for import containers and all other trade volumes are provided as appendixes to this TCS (Appendix L) to provide the ESC with a more transparent view of the modelling process and address concerns about error correction terms and hard coded data;
- Minor errors in calculations identified by FTI are corrected in the latest BISOE models;
- Econometric analysis is incorporated in BISOE's Forecast Mechanics document (Appendix L) which addresses the validity of relationships with demand drivers, data sources and quality control.

The updated Forecast Mechanics document also provides a rationale and explanation for the ensemble approach used to forecast container imports.

[59] ESC, *Inquiry into the Port of Melbourne compliance with the Pricing Order: Final Report,* 31 December 2021, p.104
[60] ESC, *Inquiry into the Port of Melbourne compliance with the Pricing Order: Final Report,* 31 December 2021, p.104
[61] ESC, *Inquiry into the Port of Melbourne compliance with the Pricing Order: Final Report,* 31 December 2021, p.107
[62] FTI Consulting, *Review of Port of Melbourne's cost allocation, demand and expenditure - Final Report*, November 2021, pp.77–97.

7.2 Actual trade volumes in 2020-21

With some exceptions, actual trade volumes for 2020-21 were significantly above forecast (Table 24). As described in the 2020-21 General Statement, these forecasts were prepared at a time of significant economic disruption and uncertainty — less than a month after the World Health Organization had declared the COVID-19 outbreak a pandemic (11 March 2020) — and did not anticipate the extent to which imports would be sustained throughout the pandemic, or the speed with which the Australian economy would recover from the initial COVID-19 shock (prior to the impact of the Delta strain in early 2021-22). Trade volumes through the September quarter were also inflated by diversions from Port Botany due to industrial action. As a result, our actual prescribed revenue in 2020-21 was above forecast. Actual 2020-21 Prescribed Services revenue was $404.6m, which was $39.3m (11 per cent) higher than the forecast of $365.3m.

Table 24 Comparison of 2020-21 forecast and actual trade volumes

Trades	Units (Million)	2020-21 (Forecast)	2020-21 (Actual)	Difference (absolute)	Difference (%)
Containers – import	TEU	1.15	1.42	0.3	23.7%
Containers – export	TEU	0.72	0.78	0.1	7.3%
Containers – empty	TEU	0.80	0.74	-0.1	-8.1%
Containers – Bass Strait	TEU	0.22	0.26	0.0	14.8%
Dry bulk	Revenue tonnes	3.70	4.69	1.0	26.9%
Liquid bulk	Revenue tonnes	6.28	5.36	-0.9	-14.6%
Motor vehicles	Revenue tonnes	6.40	6.83	0.4	6.7%
Breakbulk	Revenue tonnes	3.09	3.60	0.5	16.2%
Channel — Melbourne	Gross tonnes	104.44	109.28	4.8	4.6%
Channel — Shared	Gross tonnes	104.44	122.62	18.2	17.4%

Notes: 1. 'Containers - Bass Strait' excludes empty containers, which are not subject to a tariff.
2. 'Breakbulk' includes Wheeled Unitised cargos.

7.3 Forecast trade volumes in 2022-23

For 2022-23, we have adopted trade volume forecasts prepared by BISOE as at May 2022, which suggest import trade volumes will grow modestly but exports will grow at a stronger rate than has been seen in recent years. As outlined in Appendix K, BISOE forecasts:

- A modest lift in container import volumes (2.2%) as strong growth in processed industrial supplies (particularly building materials) is forecast to offset a flat outlook for non-food consumer goods as consumers rebalance towards services rather than goods;
- Strong growth in container export volumes (10.0%) driven by a strong outlook for crop harvests on the back of excellent growing conditions;
- A decline in liquid bulk imports (7.7%) primarily driven by a loss of market share to the Port of Geelong and the Geelong refinery following the closure of the Altona refinery; and
- Modest growth in motor vehicle volumes (1.7%) with continued strong growth in new motor vehicle imports offset by a decline in the import volumes of transport equipment.

Key risks to the trade outlook include:

- Uncertainties around the response of wage growth to record low unemployment and the extent to which consumers rebalance consumption towards services as the economy reopens. These factors may affect the strength of demand for consumer goods and consequently containerised imports;

- Capacity constraints driven by labour and material shortages resulting in delays to building and construction and capital investment. These factors may dampen demand for capital goods, processed industrial supplies, cement and gypsum, negatively impacting imports of containerised and dry bulk goods; and
- Trade dislocations and supply chain disruptions stemming from the war in Ukraine or COVID related lockdowns in China. Recent developments threaten to undo progress in resolving supply chain disruptions stemming from the COVID-19 pandemic, which presents a key risk to a range of trades.

Forecast trade volumes in 2022-23 for major tariff categories are provided below (Table 25).

Table 25 Forecast trade volumes for 2022-23

Trades	Units (Million)	2022-23 (Forecast)
Containers – import	TEU	1.46
Containers – export	TEU	0.82
Containers – empty	TEU	0.75
Containers – Bass Strait	TEU	0.27
Dry bulk	Revenue tonnes	4.96
Liquid bulk	Revenue tonnes	5.21
Motor vehicles	Revenue tonnes	7.77
Breakbulk	Revenue tonnes	3.82
Channel — Melbourne	Gross tonnes	112.42
Channel — Shared	Gross tonnes	135.79

Notes: 1. 'Containers - Bass Strait' excludes empty containers, which are not subject to a tariff.
2. 'Breakbulk' includes Wheeled Unitised cargos.

8 Rate of return on capital

8.1 Context and overview

The rate of return on capital (referred to as the weighted average cost of capital, or WACC) aims to compensate debt and equity holders for the opportunity cost of either lending or investing their funds in the Port.

8.1.1 Pricing Order requirements

The Pricing Order sets out the following requirements for the return on capital:

4.1.1 For the purposes of determining its Aggregate Revenue Requirement, the Port Licence Holder must apply an accrual building block methodology over the Regulatory Period comprising:

a) an allowance to recover a return on its capital base, commensurate with that which would be required by a benchmark efficient entity providing services with a similar degree of risk as that which applies to the Port Licence Holder in respect of the provision of the Prescribed Services

4.3.1 Subject to clause 4.3.2, in determining a rate of return on capital for the purposes of clause 4.1.1(a) the Port Licence Holder must use one or a combination of well accepted approaches that distinguish the cost of equity and debt, and so derive a weighted average cost of capital

4.3.2 The rate of return to be calculated for the purpose of clause 4.1.1(a) must be determined on a pre tax, nominal basis.

8.1.2 ESC Inquiry into PoM's compliance

The ESC made a finding of significant and sustained non-compliance in relation to PoM's compliance with the Pricing Order requirements for the return on capital over the review period.

The ESC's view was that:

- PoM's return on capital during the review period did not reflect that of a benchmark efficient entity with a similar degree of risk;[63] and
- PoM's approach to setting the rate of return over the review period was not compliant with the Pricing Order because its methodology and implementation of key drivers of the rate of return were not 'well accepted'.[64]

8.1.3 PoM's response to the ESC findings

We have addressed the ESC's inquiry findings on compliance via:

- An enforceable Undertaking that addresses the ESC's findings of significant and sustained non-compliance. In relation to WACC, the Undertaking commits to the approaches that will be applied by PoM to calculate the WACC. The ESC Minister has confirmed that he is satisfied that the terms of the Undertaking are appropriate to adequately address PoM's non-compliance; and
- Engagement of an independent expert, HoustonKemp, to estimate the WACC in accordance with the Pricing Order and in a manner consistent with the commitments in the Undertaking.

[63] ESC, *Inquiry into the Port of Melbourne compliance with the Pricing Order: Final Report*, 31 December 2021, p.28
[64] ESC, *Inquiry into the Port of Melbourne compliance with the Pricing Order: Final Report,* 31 December 2021, p.54

Undertaking on WACC

The Undertaking commits PoM, in determining a rate of return on capital for the purposes of clause 4.1.1(a) (and 4.3) of the Pricing Order, to apply a well accepted approach to estimating the return on capital parameters in that:

- All parameter values will be calculated in an internally consistent manner that has regard to the interrelationships between parameters; and
- The parameters will be estimated using methods and approaches applied by Australian and New Zealand regulators and courts for the purposes of calculating a revenue requirement.

The Undertaking also contains specific, detailed commitments concerning the approach to the cost of equity and its constituent components (i.e. the risk free rate, market risk premium and beta), gamma (adjustment for dividend imputation), cost of debt, and gearing.[65]

8.2 Rate of return estimate for the 2022-23 Regulatory Period

We sought independent expert advice for the 2022-23 WACC

For the WACC estimate for the 2022-23 Regulatory Period, we obtained independent expert advice from HoustonKemp. Under the terms of this engagement, HoustonKemp was required to be objective, professional and to form an independent view on the estimate of the WACC.

HoustonKemp estimated a WACC of 8.99% (pre-tax nominal) for the 2022-23 Regulatory Period. We have adopted HoustonKemp's WACC estimate for the 2022-23 Regulatory Period on the basis that it is consistent with the Pricing Order and the Undertaking. HoustonKemp's report is provided as Appendix I to this TCS.

The WACC estimated by HoustonKemp is 76 basis points (bp) higher than the WACC estimate from PoM's 2021-22 TCS, which was 8.23% (pre-tax nominal). The difference between the two WACC estimates is primarily due to the 87 bp increase in the risk free rate from 1.70% in 2021-22 to 2.57% in 2022-23.

HoustonKemp has advised that under a scenario where the risk free rate had not changed (i.e. adopting a risk free rate of 1.70%, but updating other market-driven parameters), the WACC estimate would be 8.26% (pre-tax nominal), 3 bp higher than the 2021-22 WACC.

WACC for the 2022-23 Regulatory Period

Table 26 below sets out HoustonKemp's estimates of the individual WACC parameters for the 2022-23 Regulatory Period and reconciles them to the Undertaking.

Table 26 WACC estimate for the 2022-23 Regulatory Period

Parameter	2021-22 WACC	2022-23 WACC	Reconciliation to Undertaking
Return on debt (including debt raising costs)	4.90%	4.78%	HoustonKemp continues the use of the trailing average cost of debt used in previous years, which reflects: ▪ BBB credit rating; ▪ 10-year term of debt; and ▪ 10 basis points debt raising costs. These parameters are consistent with clauses 19, 24, and 27 of the Undertaking.
Return on equity	8.24%	8.54%	HoustonKemp continues the use of the Sharpe-Lintner Capital Asset Pricing Model (SL-CAPM), with no weight given to the Black CAPM or Fama-French Model. Consistent with clause 18 of the Undertaking.

[65] The Undertaking is available on our website: Regulatory Process | Port of Melbourne

Parameter	2021-22 WACC	2022-23 WACC	Reconciliation to Undertaking
- risk free rate	1.70%	2.57%	HoustonKemp continues the use of the 20-day average of the 10-year Commonwealth Government Securities (CGS) yield. Consistent with clause 20 of the Undertaking.
- MRP	6.54%	6.63%	HoustonKemp's approach entails: ▪ 85% weight to the 6.62% estimate from historical excess returns (HER), calculated by giving equal weight to the: (1) Brailsford, Handley, and Maheswaran (BHM) dataset; and (2) NERA datasets; and ▪ 15% weight to the 6.68% estimate from forward-looking returns (Dividend Discount Models, or DDMs). HoustonKemp uses IPART's 'current' MRP estimate and Dividend Discount Model (DDM) estimates from AER, ERA and QCA. HoustonKemp calculates the mean DDM estimate for the AER, ERA and QCA, before taking the median across the DDM estimates of all four regulators. HoustonKemp's approach differs from the 2021-22 approach in: ▪ The selection of models and averaging estimates. The 2021-22 approach used DDM estimates from the QCA, ERA and IPART (using a mean of three of IPART's five models). HoustonKemp uses a median of the average result from each regulator, rather than the mean of the average results used in the 2021-22 TCS. HoustonKemp notes that the ESC observed that in 2020-21 PoM did not use all five of IPART's DDMs, and that IPART uses the median estimate instead of the simple average.[66] HoustonKemp also notes that the use of the median is consistent with CEPA's view that the median DDM estimate is preferable to the mean because of its robustness to extreme observations.[67] ▪ The implementation of models. In its review of the 2020-21 WACC the ESC found that PoM did not correctly implement the IPART and ERA DDMs.[68] HoustonKemp has resolved this issue by adopting IPART's forward-looking estimate in its entirety (i.e. IPART's 'current' MRP estimate), and notes that its version of the ERA model generates estimates that are within 0.1% of the ERA's estimate for 31 October 2018 and consistent with the ERA's 2018 and 2019 rail WACC decision. Consistent with clause 21 of the Undertaking.
- equity beta	1.0	0.90	Formula: (equity beta) = (asset beta) / (1 – gearing)
- asset beta	0.70	0.72	HoustonKemp's construction of the comparator set entails: ▪ Identifying a preferred sample of comparator firms that own and operate container port and channel infrastructure, and whose revenues are primarily derived from container port operations. This differs from the 2021-22 approach, which included comparators form North American railroads. In its review of the 2020-21 WACC the ESC found that PoM's inclusion of railroads as comparators was not well accepted.[69]

[66] HoustonKemp, *Estimation of the weighted average cost of capital for the Port of Melbourne*, May 2022, p.32
[67] HoustonKemp, *Estimation of the weighted average cost of capital for the Port of Melbourne*, May 2022, p.28
[68] ESC, *Inquiry into the Port of Melbourne compliance with the Pricing Order: Final Report,* 31 December 2021, pp.57-58
[69] ESC, *Inquiry into the Port of Melbourne compliance with the Pricing Order: Final Report,* 31 December 2021, p.69

Parameter	2021-22 WACC	2022-23 WACC	Reconciliation to Undertaking
			▪ Applying filters for market capitalisation ($100m) and liquidity (based on bid-ask spread >1% or >20 days of no trading). HoustonKemp notes that these filters are the same as those applied by CEPA in its work for the ESC.[70] ▪ Not applying a country filter. The ESC found that PoM's approach of not applying a country filter in 2017-18 and 2018-29 was not well accepted.[71] HoustonKemp notes: – After the ESC's final report was published, the Western Australian Supreme Court's (WASC's) judgment for Perth Airport rejects the view that the comparator sample should be restricted to companies with similar country risks. Instead, the WASC accepts a sample based on the NZCC's comparator sample that does not apply a country filter; – Having considered regulatory precedent, HoustonKemp considers it well accepted to apply filters for market capitalisation and liquidity without applying a country filter;[72] ▪ Adopting the average of: – the weekly and four-weekly asset beta estimates, where each estimate is itself the average of betas derived for each day of the week/four weeks; and – the five-year and ten-year asset beta estimates. This differs from the 2021-22 approach, which adopted a point estimate of 0.70 from a range defined by weekly and monthly returns over 5- and 10-year averaging periods. Consistent with clause 24, 25 and 26 of the Undertaking. HoustonKemp also undertook sensitivity analysis concerning the application of a country filter by: (1) Removing firms domiciled in China; (2) Removing firms with China as a county of risk; and (3) Removing firms with developing country risk. This results in a sensitivity range of 0.70 to 0.72, which HoustonKemp considers demonstrates the robustness of its approach of estimating asset beta that does not involve the application of a country filter.[73]
Gearing	30%	20%	HoustonKemp calculates the benchmark gearing as the average of five-year and ten-year gearings of its preferred comparator sample (based on net debt) with a preference for maintaining a stable gearing estimate from previous determinations. HoustonKemp notes that CEPA, the ERA and NZCC all use net debt. HoustonKemp sets a lower bound of zero gearing for each company, which means that companies with negative net debt, which often reflect large cash holdings, will be treated as having zero leverage. HoustonKemp states that this is consistent with the NZCC's approach.[74] HoustonKemp's approach differs from the 2021-22 TCS, which had regard to gearing levels of recent port acquisitions in addition to the average gearing of the comparator set. HoustonKemp notes that the

[70] HoustonKemp, *Estimation of the weighted average cost of capital for the Port of Melbourne*, May 2022, p.12
[71] ESC, *Inquiry into the Port of Melbourne compliance with the Pricing Order: Final Report,* 31 December 2021, p.69
[72] HoustonKemp, *Estimation of the weighted average cost of capital for the Port of Melbourne*, May 2022, p.12
[73] HoustonKemp, *Estimation of the weighted average cost of capital for the Port of Melbourne*, May 2022, pp.13, 27
[74] HoustonKemp, *Estimation of the weighted average cost of capital for the Port of Melbourne*, May 2022, p.23

Parameter	2021-22 WACC	2022-23 WACC	Reconciliation to Undertaking
			ESC found that precedent from Australian regulators and financial practitioners did not support using acquisition gearings.[75] Consistent with clause 23 of the Undertaking.
Tax rate	30%	30%	
Gamma	0.50	0.50	Based on the utilisation approach, where: (gamma) = (utilisation rate 0.625 x distribution rate 0.8) Consistent with clause 22 of the Undertaking.
Pre tax nominal WACC	**8.23%**	**8.99%**	Consistent with clause 17 of the Undertaking.

[75] HoustonKemp, *Estimation of the weighted average cost of capital for the Port of Melbourne*, May 2022, p.22

9 Aggregate Revenue Requirement and Prescribed Services revenue

9.1 Context and overview

This Chapter:

- Demonstrates the calculation of the 2022-23 Aggregate Revenue Requirement (ARR) using the Accrual Building Block Model (ABBM);
- Sets out Prescribed Services revenue (subject to the TAL) plus revenue from legacy contracts; and
- Compares the 2021-22 ARR with Prescribed Services' revenue (subject to the TAL).

9.1.1 ESC inquiry and PoM's response

The Pricing Order sets out the following requirements for the determination of the ARR:

> *4.1.1 For the purposes of determining its Aggregate Revenue Requirement, the Port Licence Holder must apply an accrual building block methodology over the Regulatory Period comprising:*
>
> *a) an allowance to recover a return on its capital base, commensurate with that which would be required by a benchmark efficient entity providing services with a similar degree of risk as that which applies to the Port Licence Holder in respect of the provision of the Prescribed Services (see clauses 4.2 and 4.3);*
>
> *b) an allowance to recover the return of its capital base (see clause 4.4); and*
>
> *c) an allowance to recover its forecast operating expenses, commensurate with that which would be required by a prudent service provider acting efficiently (see clause 4.5); less*
>
> *d) an indexation allowance (see clause 4.6).*

The ESC made a finding of significant and sustained non-compliance in relation to PoM's compliance with the Pricing Order requirements for the ARR over the review period.[76] As set out in Chapter 8, we have addressed the ESC's finding on the ARR in our response to the ESC's findings on the rate of return via an enforceable Undertaking and engagement of an independent expert to estimate the WACC in accordance with the Pricing Order and Undertaking.

9.2 Aggregate Revenue Requirement

PoM's ARR for 2022-23 is $449.7m. This is the lowest ARR since the beginning of the Port Lease, which is primarily driven by a large downwards adjustment for the indexation allowance ($264.7m), due to higher than normal inflation.

We have calculated the 2022-23 ARR using the ABBM in accordance with clause 4 of the Pricing Order – as set out in the Regulatory Model at Appendix B and User Guide at Appendix C. In accordance with clause 2.2.1 of the Pricing Order, we have used the same ABBM and parameters for both Dedicated and Shared Channels. Table 27 sets out the ABBM inputs.

[76] ESC, *Inquiry into the Port of Melbourne compliance with the Pricing Order: Final Report,* 31 December 2021, p.11

Table 27 ARR, $ million

	2022-23 (F)
Return on capital	467.5
Return of capital	96.0
Operating expenses (opex)	150.9
Indexation allowance	-264.7
ARR	**449.7**

9.3 Recovery of depreciation and roll-forward of the capital base

In accordance with clause 4.4.2(a) we have adopted an alternative depreciation methodology because the return of capital derived using the straight-line depreciation methodology cannot be fully recovered in 2022-23 from Prescribed Services revenue subject to the TAL. Under our alternative methodology, the amount of straight-line depreciation that cannot be recovered from Prescribed Services revenue in a given regulatory year is deferred for recovery in future years. Chapter 11 provides further detail on our alternative depreciation methodology.

For the first time since the commencement of the Port Lease, PoM is forecasting to recover depreciation during the 2022-23 regulatory year (Table 28). In the 2022-23 regulatory period, using our alternative depreciation methodology, we are forecasting:

- Recovery of $96.0m depreciation; and
- Deferral of $75.2m depreciation.

The forecast recovery of depreciation in 2022-23 is primarily due to the impact of a high CPI (5.1%). A high CPI drives up the Prescribed Services revenue that PoM may recover under the TAL via larger tariff increases and drives down the aggregate revenue requirement via a larger indexation allowance.

Table 28 Depreciation accrued, recovered and deferred in each Financial Year, $ million

	2016-17 (Actual)	2017-18 (Actual)	2018-19 (Actual)	2019-20 (Actual)	2020-21 (Actual)	2021-22 (Forecast)	2022-23 (Forecast)
Straight-Line Depreciation from existing and new assets in the Financial Year	295.7	214.9	127.8	137.4	146.6	155.3	171.2
Depreciation recovered in the Financial Year (i.e. the return of capital included in the ARR)	0.0	0.0	0.0	0.0	0.0	0.0	96.0
Depreciation from Financial Year deferred for future recovery	295.7	214.9	127.8	137.4	146.6	155.3	75.2

9.3.1 Capital base roll forward

For the 2022-23 Regulatory Period, we have forecast the rolled forward value of the capital base as follows:

- The opening asset base, at 1 July 2022, is forecast to be $5,113.2 million; and
- The closing asset base, at 30 June 2023, is forecast to be $5,459.6 million.

We have calculated these values in accordance with clause 4.2.1 of the Pricing Order by:

- Adding indexation in accordance with clauses 4.2.1(b) and 4.6.1(a) of the Pricing Order. Clause 4.6.1(a) provides that the opening capital base must be indexed by the percentage change in CPI for the relevant financial year;
- Adding prudent and efficient net Capex in accordance with clauses 4.2.1(c) and 4.6.1(b) of the Pricing Order. Clause 4.6.1(b) provides that Capex is indexed by half a year's inflation (i.e. half of the percentage change in CPI) for the relevant financial year. This assumes Capex is incurred halfway through a financial year, and is net of any capital contributions or proceeds from disposing assets; and
- Deducting depreciation (i.e. the return of capital allowance). As described above, under PoM's alternative depreciation methodology, straight-line depreciation that cannot be recovered from Prescribed Services revenue in 2022-23 is deferred for recovery in future years.

When rolling forward the capital base, we will use actual capex, actual depreciation and forecast revenue (including forecast opex).

Table 29 sets out our forecast closing capital base values as at 30 June for each regulatory year from 2016-17 to 2022-23. This capital base includes the costs of contracts for Prescribed Services that were in place at the time of the PLT. It does not include the costs of any new contracts that were entered into after the PLT took place. The Regulatory Model at Appendix B provides further details on the capital base roll forward.

Table 29 Capital Base roll-forward, $ million

	2016-17 (Actual)	2017-18 (Actual)	2018-19 (Actual)	2019-20 (Actual)	2020-21 (Actual)	2021-22 (Forecast)	2022-23 (Forecast)
Opening Capital Base (1 July)	4,142.0	4,269.0	4,409.9	4,551.5	4,722.1	4,871.9	5,113.2
Plus Indexation Allowance	54.8	91.3	84.3	61.4	104.0	55.4	264.7
Plus Efficient Capex	72.2	49.6	57.3	109.2	45.8	186.0	177.7
Less Return of Capital	0.0	0.0	0.0	0.0	0.0	0.0	-96.0
Closing Capital Base (30 June)	**4,269.0**	**4,409.9**	**4,551.5**	**4,722.1**	**4,871.9**	**5,113.2**	**5,459.6**

The forecast closing 2021-22 capital base of $5,153.4 million submitted in our 2021-22 TCS has been adjusted downward by $40.2m to $5,113.2m. This adjustment is primarily due to the inclusion of 2020-21 actual capex values, which were $35.0 million lower than forecast. It is also a result of revisions to the actual closing capital base between 2017-18 and 2019-20 (Table 30). These revisions flow from minor errors in inputs to PoM's regulatory model identified through the ESC's inquiry and PoM's own analysis, which have been corrected in this TCS. Due to the operation of the TAL, none of the revisions identified would have impacted historical tariffs charged to Port Users. Further details of these revisions are set out in Appendix D.

Table 30 Revisions to Closing Capital Base (30 June), difference between 2021-22 and 2022-23 TCS, $ million

	2016-17 (Actual)	2017-18 (Actual)	2018-19 (Actual)	2019-20 (Actual)	2020-21 (Actual/Forecast)	2021-22 (Forecast)
2022-23 TCS	4269.0	4409.9	4551.5	4722.1	4871.9 (A)	5113.2
2021-22 TCS	4269.0	4410.9	4552.5	4726.3	4911.6 (F)	5153.4
Change	-	-1.0	-1.0	-4.2	-39.8	-40.2

9.4 Prescribed services revenue (subject to the TAL)

The TAL is defined in clause 14 of the Pricing Order as "…the percentage change in CPI between the March quarter immediately preceding the relevant Financial Year and the March quarter in the Financial Year two years preceding the relevant Financial Year".

The 2022-23 TAL is based on the percentage change between the 2021 March quarter and 2022 March quarter CPI (All Groups Index Number, weighted average of eight capital cities published by the Australian Bureau of Statistics) and is 5.1 per cent.

The 2022-23 Prescribed Services revenue (subject to the TAL) is derived by:

- Applying the TAL of 5.1 per cent to the tariffs set out in our 2021-22 Reference Tariff Schedule; and
- Multiplying these tariffs by the 2022-23 forecast trade volumes prepared by BISOE and PoM (discussed in section 7 and Appendix K).

The WATI is the weighted average rate of change in all tariffs. As agreed with the ESC, the calculation of the WATI excludes revenue from contracts with Port Users for Prescribed Services.

The WATI for 2022-23 was calculated using weightings based on 2020-21 audited revenue (described in section 10.2). The 2022-23 WATI is 5.1 per cent. Audited revenues are contained in Appendix N, which provides KPMG's "Report of factual findings to Management of the Port of Melbourne Group Prescribed Services Revenue 30 June 2021".

We have added Prescribed Services revenue associated with the legacy contracts to 'Prescribed Services revenue (subject to the TAL)' for the purposes of comparing it with the ARR. We have agreed to this treatment of legacy contracts with the ESC.

For the avoidance of doubt, our total Prescribed Services revenue comprises:

- Prescribed Services revenue (subject to the TAL); and
- Revenue from both legacy and new contracts for Prescribed Services. This contract revenue is confidential and is separately reported to the ESC in Appendix O.

9.4.1 Comparison of ARR and Prescribed Services revenue

Table 31 sets out our actual and forecast ARR, as well as Prescribed Services revenue (subject to the TAL) plus revenue from legacy contracts for 2016-17 to 2022-23. In all years prior to 2022-23, Prescribed Services revenue plus revenue from legacy contracts was lower than the ARR and a portion of PoM's ARR was therefore unrecoverable (even after deferring all depreciation). In 2022-23, after deferring the amount of straight-line deprecation that cannot be recovered in the regulatory year, we forecast that PoM's Prescribed Services revenue plus revenue from legacy contracts will be equal to the ARR.

Table 31 Comparison of ARR and Prescribed Services (subject to the TAL), $ million

	2016-17 (Actual)	2017-18 (Actual)	2018-19 (Actual)	2019-20 (Actual)	2020-21 (Actual)	2021-22 (Forecast)	2022-23 (Forecast)
Return on capital	481.9	495.3	511.2	481.7	423.7	408.5	467.5
Return of capital	0.0	0.0	0.0	0.0	0.0	0.0	96.0
Operating expenses (opex)	135.4	128.4	127.8	128.2	133.9	144.6	150.9
Indexation allowance	-54.8	-91.3	-84.3	-61.4	-104.0	-55.4	-264.7
ARR (excl. deferred depreciation)	**562.6**	**532.4**	**554.6**	**548.5**	**453.6**	**497.7**	**449.7**
WATI excluding Export Pricing Decision tariffs (%)	n.a.	2.1%	1.9%	1.3%	2.2%	1.1%	5.1%
WATI including Export Pricing Decision tariffs (%)	n.a.	1.1%	0.9%	0.5%	2.2%	1.1%	5.1%
TAL (%)	n.a.	2.1%	1.9%	1.3%	2.2%	1.1%	5.1%
Prescribed Services revenue (subject to the TAL) plus revenue from legacy contracts	**328.4**	**341.1**	**371.2**	**388.6**	**365.3**	**410.4**	**449.7**
Unrecoverable ARR	**234.1**	**191.3**	**183.4**	**159.9**	**88.4**	**87.2**	**0.0**

Note 1 – We have adopted an alternative approach to straight-line depreciation on the basis that the return of capital derived using a straight-line depreciation methodology is not capable of being recovered in the applicable Financial Year (clause 4.4.2 of the Pricing Order). See Chapter 11 for an overview of our alternative depreciation methodology
Note 2 – We have used audited revenue data for 2020-21 to calculate the WATI for 2022-23.

10 Tariffs

10.1 2022-23 Tariffs

As outlined in section 9.4, the forecast 2022-23 Prescribed Services revenue (subject to the TAL) plus revenue from legacy contracts is lower than the ARR (calculated under the ABBM). Our 2022-23 tariffs are therefore subject to the TAL.

We also confirm that:

- The WATI (excluding tariffs for full outbound container wharfage services) for Prescribed Services is 5.1 per cent;
- All tariffs will increase by the TAL of 5.1 per cent, being the annual change in CPI to March 2022; and
- All tariffs have been adjusted by the same percentage adjustment consistent with clause 3.2.1 of the Pricing Order. There are no new or discontinued tariffs from 2022-23.

Our 2022-23 tariffs are set out in the Reference Tariff Schedule (RTS) provided at Appendix A and are effective from 1 July 2022.

10.2 Compliance with the Weighted Average Tariff Increase

Under clause 3.1.1 of the Pricing Order, PoM must ensure that the Weighted Average Tariff Increase (WATI) implied by prescribed service tariffs does not exceed the tariff adjustment limit (the percentage change in CPI over the preceding year). The WATI is defined under clause 14 of the Pricing Order as follows:

> ***Weighted Average Tariff Increase*** *means, in respect of a Financial Year, the expected weighted average rate of increase in the Prescribed Service Tariffs using weightings based on historical revenues derived from the Prescribed Service Tariffs in the most recent Financial Year for which audited data are available or, if there is no historic audited data upon which to calculate the expected weighted average rate of increase on this basis, an alternative estimate of revenue for the purpose of calculating weightings on a basis determined by the Commission.*

The ESC's inquiry into PoM's compliance with the Pricing Order found PoM non-compliant with clause 3.1.1 because PoM did not use audited revenues to calculate the WATI between 2018-19 and 2020-21The ESC did not consider this non-compliance to be significant and it did not have any impact on tariffs during the review period.[77]

PoM has addressed this in the 2022-23 TCS by ensuring that revenue weights at an individual tariff level (e.g. 'containerised full – outward wharfage') are directly derived from audited revenue figures at a tariff category level (e.g. wharfage fees). This is done by taking the audited revenue figure for each tariff category and splitting this revenue across individual tariffs within that category using a weighting based on tariff volumes. Consequently, the implied total revenue figure is reconciled to the audited revenue figure at both a category level and an aggregate level.

The ESC also noted that PoM had initially calculated the WATI incorrectly by virtue of including slipway tariffs in the calculation (which were not set out in the Pricing Order) and by performing the calculation based on rounded tariffs.[78] PoM confirms it has addressed these issues as described in Appendix D. Slipway tariffs have been excluded from any WATI calculation and all tariffs are now presented in the Regulatory Model in an unrounded form. The WATI is calculated based on these unrounded tariffs. The tariffs are then rounded for calculations of forecast revenue. Consistent with past practice, we have calculated 2022-23 tariffs by applying the cumulative CPI index to the Initial Prescribed Services Tariffs, rather than by applying the annual CPI to the previous year's tariffs. However, because the Regulatory Model now incorporates

[77] ESC, *Inquiry into the Port of Melbourne compliance with the Pricing Order: Final Report,* 31 December 2021, p.111.
[78] ESC, *Inquiry into the Port of Melbourne compliance with the Pricing Order: Final Report,* 31 December 2021, p.206.

unrounded tariffs, it will be possible for PoM to calculate annual tariff increases by applying the annual percentage change in CPI to the previous year's tariffs from 2023-24 onwards.

10.3 Compliance with efficient cost bounds

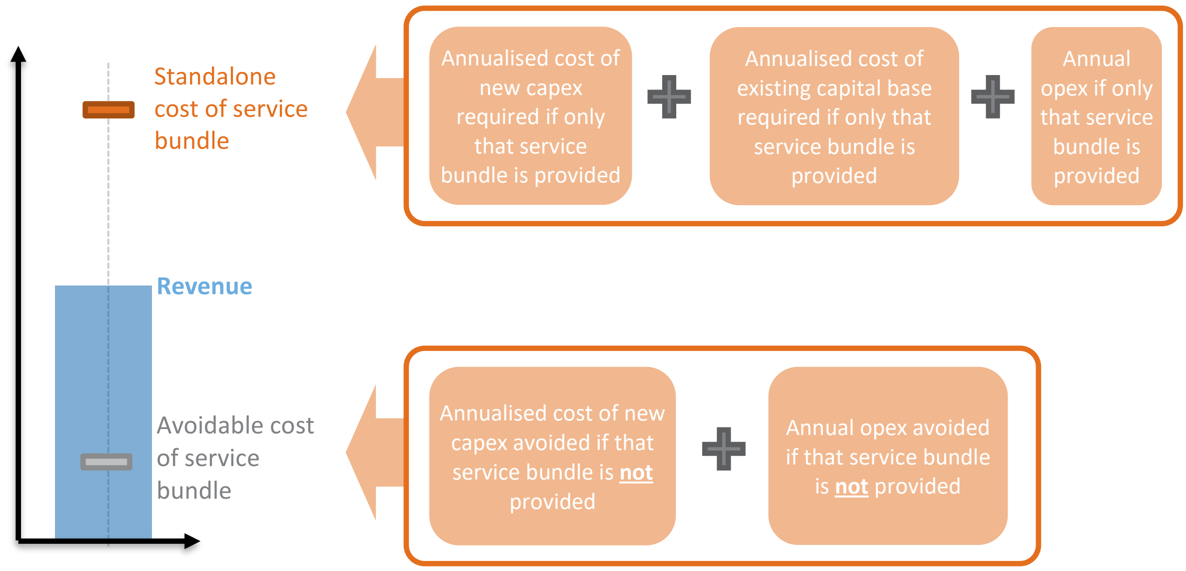
Clause 2.1.1 of the Pricing Order requires that revenue for each Prescribed Service Bundle should be on, or between, the upper bound (clause 2.1.1(b)(i)), which represents the standalone cost of providing each Prescribed Service Bundle, and the lower bound (clause 2.1.1(b)(ii)), which represents the avoidable cost of not providing the Prescribed Service Bundle. This is commonly known as the "efficient pricing band" to represent the range of possible tariff revenue that could be considered economically efficient for a given service bundle. If revenue from a service bundle were below the avoidable cost this could imply that users of this bundle were inefficiently subsidised by other Port Users. If revenue from a service bundle were above the standalone cost, this could imply that Port Users would be incentivised to inefficiently self-provide these services, despite PoM's cost of provision being lower.

PoM's Regulatory Model (Appendix B) demonstrates our compliance with clause 2.1.1(b) of the Pricing Order by:

- Estimating the indicative standalone and avoidable costs of supplying each Prescribed Services Bundle, based on the most recent available data; and
- Demonstrating that forecast revenue for each Prescribed Services Bundle falls within those efficient pricing bounds in accordance with the Pricing Principles in the Pricing Order.

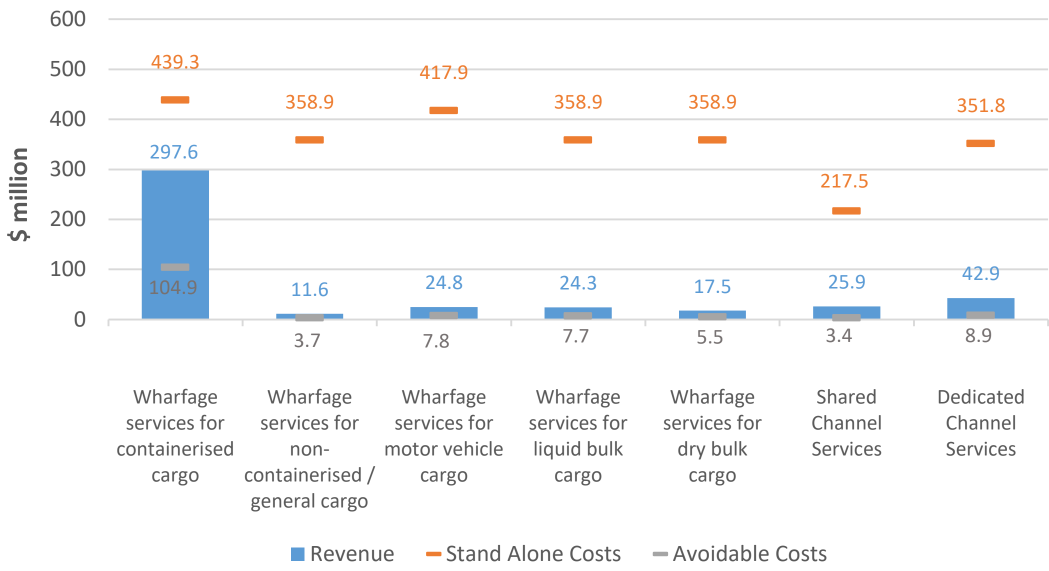
Figure 10 shows the conceptual approach that is used to calculate the efficient cost bounds in the model. The blue bar represents the revenue from a given Prescribed Services Bundle, while the two orange circles represent the standalone and avoidable costs for that bundle. The two boxes to the right illustrate which components are used to calculate the upper efficient cost bound (the standalone cost) and lower efficient cost bound (the avoidable cost).

Figure 10: Illustrative representation of the efficient cost bounds



In 2022-23, the revenue from each prescribed service bundle is forecast to fall within the relevant efficient cost bounds (Figure 11).

Figure 11: Efficient cost bounds and revenue by prescribed service bundle, 2022-23



11 Treatment of deferred depreciation

11.1 Background

11.1.1 Why does PoM defer the recovery of depreciation?

During the 'Pricing Order transition period' — which runs from the commencement of the Pricing Order in 2016 until 2032 at the earliest, or 2037 at the latest — the costs that PoM may recover through tariff revenue from Prescribed Services are constrained by the Tariffs Adjustment Limit (TAL). Over the first six years of the Port Lease, the operation of the TAL has meant that PoM's tariff revenue from Prescribed Services has fallen well short of the efficient costs incurred to provide those services.[79] We expect these revenue shortfalls to persist for much of the remainder of the TAL period.

The Pricing Order partly addresses the potential for revenue shortfalls during the Pricing Order transition period (i.e. the TAL period) via a mechanism to change the timing of the recovery of depreciation costs. Under clause 4.4.2(a) of the Pricing Order, the operation of the TAL means that if straight-line depreciation costs cannot be recovered in any year, PoM may use an 'alternative depreciation methodology' to change the profile of the recovery of depreciation costs.[80]

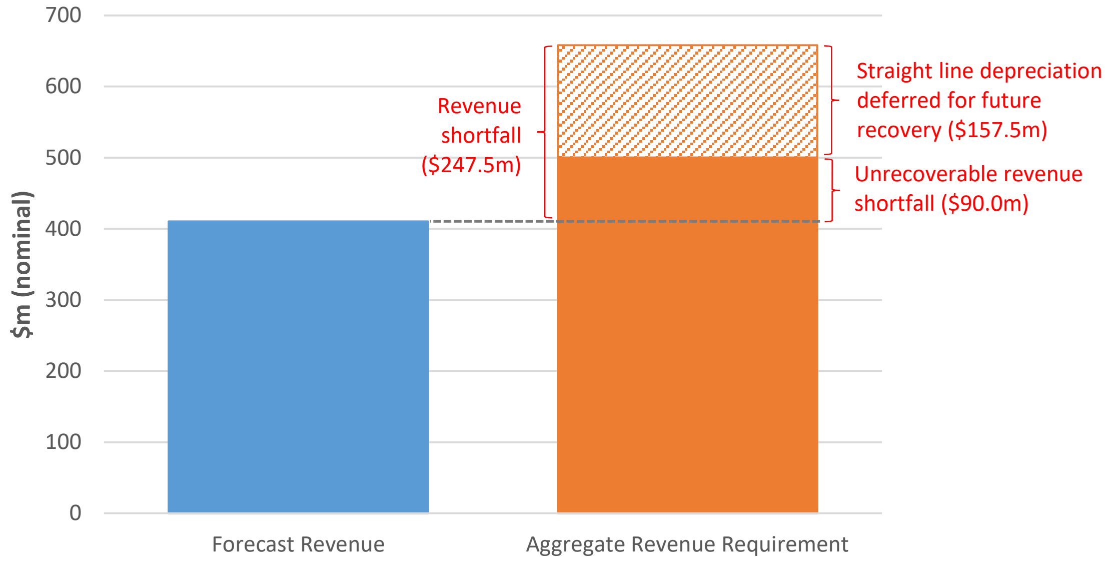
11.1.2 PoM's approach to date

In each of the first six years of the Port Lease, in accordance with clause 4.4.2(a) PoM adopted an alternative depreciation methodology that deferred the recovery of unrecoverable depreciation costs to future years. In 2022-23, it is expected that PoM will partially recover depreciation costs, with unrecoverable depreciation costs deferred in accordance with clause 4.4.2(a).

By deferring depreciation recovery, some of the revenue shortfall PoM incurs can be recovered through future tariffs. For example, in 2021-22, PoM's ARR (inclusive of forecast straight-line depreciation in that year) totalled $658.0m, while forecast tariff revenue was limited to $410.4m due to the TAL (Figure 12). By fully deferring the recovery of the unrecoverable component of forecast straight-line depreciation from that year (which in this case, was the entire straight-line deprecation cost of $157.5m), PoM reduced the revenue shortfall from $247.5m to $90.0m. The remaining shortfall in the ARR of $90.0m is unrecoverable.

[79] Under clause 2.1.1(a) of the Pricing Order, the efficient costs of providing Prescribed Services are determined by the application of an accrual building block methodology, which is described in clause 4 (Aggregate Revenue Requirement).
[80] Pricing Order clause 4.4.2

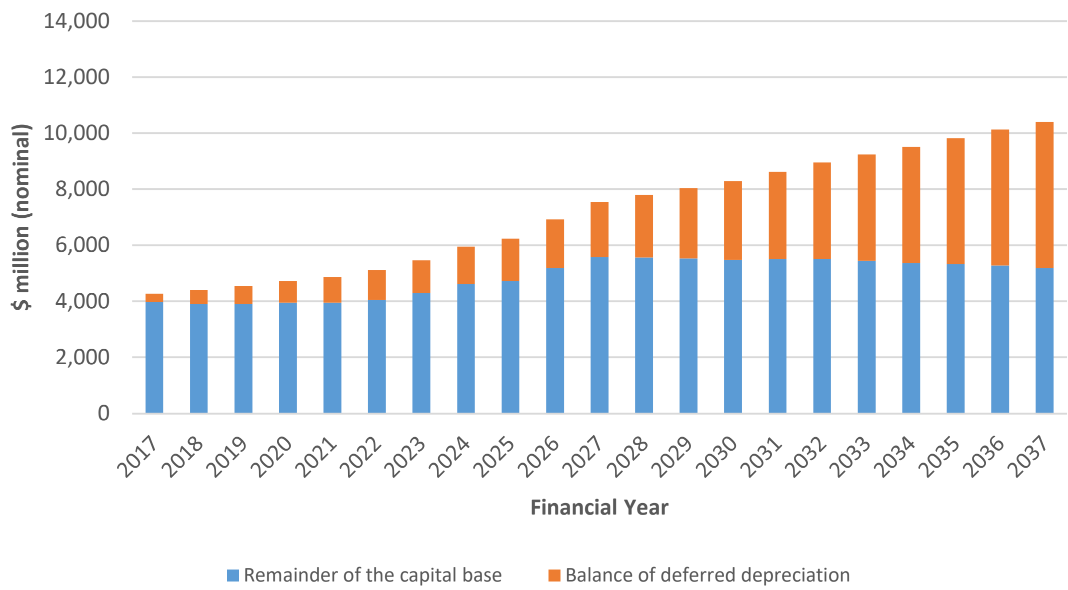
Figure 12: PoM's tariff revenue and aggregate revenue requirement in 2021-22



11.1.3 Future depreciation deferral and recovery

For the remainder of the TAL period, we expect that most new depreciation will continue to be deferred, and that there will be a substantial deferred depreciation balance to be recovered through tariffs after the end of the TAL period. By the end of the TAL period in 2037, our current projections (discussed further in section 11.4) suggest that PoM's deferred depreciation balance could be in the order of $5 billion and constitute roughly half of PoM's total capital base at that time (Figure 13).[81]

Figure 13: Indicative projection of PoM's capital base to the end of the TAL period



[81] Under clause 4.2.1 of the Pricing Order, there are two key drivers of growth in the capital base: prudent and efficient capital expenditure, and indexation (inflation). In addition to PoM's investment gateway processes for developing and executing capital expenditure plans, actual capital expenditure is subject to periodic, ex-post review by the ESC to ensure that PoM's capital base complies with the Pricing Order, particularly in relation to additions of prudent and efficient capital expenditure. Hence while these projections are based on our current expectations of expenditure requirements over the course of the Port Lease, they are high-level and indicative only, and not reflective of any commitments to invest or investment decisions to be made in the future.

The timing and approach of PoM's recovery of deferred depreciation in the post TAL period will therefore significantly impact the tariff profile after the TAL comes to an end. As required under the Pricing Order, once the transition period ends, PoM can only adopt an alternative methodology to straight-line depreciation if it is "reasonably likely to reduce the variance in the expected annual percentage changes in the level of Prescribed Services Tariffs through to the end of the Port Lease" (relative to the straight-line approach).[82]

11.1.4 Stakeholder consultation and feedback prior to 2022

In prior years PoM has sought feedback from stakeholders on the principles and approaches that should govern our depreciation recovery. In particular, this topic was a feature of PoM's 2021 Industry Consultation. As part of this program, PoM explained how the treatment of deferred depreciation could impact future tariffs in the post TAL period, and described alternative approaches to depreciation recovery with reference to illustrative depreciation profiles and price paths.

PoM sought feedback from stakeholders on the alternative approaches presented, the principles that should inform deferred depreciation recovery and how stakeholders would like to be consulted further on the issue. The clear preference of stakeholders was that minimising price volatility in the post TAL period should be the primary principle governing the approach to recovery. Stakeholders also expressed some interest in generally being informed about the potential impacts of deferred depreciation recovery.

In the 2021-22 TCS, PoM proposed an approach to the recovery of deferred depreciation in the post-TAL period. Informed by the view of stakeholders and the advice of an independent regulatory expert, the approach prioritised minimising price volatility.[83]

11.1.5 Feedback from the ESC

The ESC's inquiry into PoM's compliance with the Pricing Order found that PoM's approach to calculating and applying depreciation was compliant with the Pricing Order over the review period.[84] However, the ESC also observed that Port Users desired a greater understanding of the impact of deferred depreciation on future tariffs.[85] The ESC considered that PoM's consultation on the development of an approach to depreciation recovery did not provide Port Users with sufficient information on future tariff impacts and that, consequently, "Port Users could not make informed contributions to the Port's consultation".[86]

PoM is eager to ensure that its approach to depreciation recovery considers the view of stakeholders and that stakeholders are well informed about depreciation recovery approaches and future tariff impacts. Consequently, this year PoM sought further feedback from stakeholders on its proposed approach and provided stakeholders with greater detail about alternative approaches and their potential impacts on future tariffs.

The remainder of this chapter describes:

- The stakeholder consultation on depreciation approaches that PoM undertook in 2022 (section 11.2);
- The approach to depreciation deferral and recovery PoM has ultimately adopted (section 11.3);
- Indicative projections of depreciation recovery and future tariff impacts (section 11.4); and

[82] Pricing Order clause 4.4.2(b)

[83] See 2021-22 TCS General Statement, for a summary of the consultation that we undertook on depreciation and the advice we received from Incenta p.47, available on the PoM website: https://www.portofmelbourne.com/regulatory-information/regulatory-quick-links/ . Incenta's report, "Appendix R: Options for structuring the return of capital for PoM (Incenta)" is available on the ESC's website, here Port of Melbourne compliance with pricing regulations | Essential Services Commission

[84] ESC, *Inquiry into the Port of Melbourne compliance with the pricing order – final report*, 31 December 2021, p. 97

[85] ESC, *Inquiry into the Port of Melbourne compliance with the pricing order – final report*, 31 December 2021, p. 33

[86] ESC, *Inquiry into the Port of Melbourne compliance with the pricing order – final report*, 31 December 2021, p. 123

- Comparisons with straight-line depreciation recovery to demonstrate that PoM's alternative methodology is reasonably likely to reduce price volatility in compliance with the Pricing Order (section 11.5).

11.2 Stakeholder consultation

Consulting stakeholders on our approach to the recovery of depreciation was a key focus of our 2022 Industry Consultation program. This section describes:

- The information we provided to stakeholders and the feedback we sought (section 11.2.1); and
- The feedback we received and our response (section 11.2.2).

11.2.1 Information provided and feedback sought

PoM's treatment of deferred depreciation formed one of five topics to feature in our 2022 Consultation Paper. The Consultation Paper was an innovation for our 2022 engagement program to ensure that stakeholders could engage with PoM more effectively, armed with appropriate information. The content of the Consultation Paper was informed by feedback received through the ESC inquiry and early engagement with key stakeholders. In the Consultation Paper we:

- Described our regulatory framework and the need to defer depreciation recovery;
- Provided an indicative projection of PoM's capital base and deferred depreciation balance to the end of the TAL period;
- Summarised the feedback we received from stakeholders to date on this topic;
- Set out a proposed approach to depreciation recovery;
- Provided indicative projections of future depreciation recovery and future tariffs under both the proposed approach and a straight-line approach informed by real world data; and
- Explained the sensitivity of future tariff impacts to changes in key assumptions (e.g. the rate of growth in trade volumes).

The content of the Consultation Paper was presented in a summarised form in subsequent online stakeholder forums hosted by PoM. During the forums, stakeholders were provided with an opportunity to ask questions about the content presented. In both the Consultation Paper and online forums, we also encouraged stakeholders to contact us directly should they have any further questions.

We noted that feedback we received would inform the design of PoM's approach and assist in continuing to ensure that Port Users have appropriate information on the topic. In the stakeholder forums, we also made it clear that we would make a decision on an alternative depreciation in time for inclusion in the 2022-23 TCS.

11.2.2 Feedback received and our response

Of the eight stakeholders that made written submissions in response to PoM's Consultation Paper, three provided comments on the topic of depreciation recovery: the International Forwarders & Customs Brokers Association of Australia Ltd (IFCBAA); Patrick Terminals; and DP World. Key comments from each of these submissions and PoM's responses are set out below (Table 32).

Table 32 Comments from submissions and PoM's response

Stakeholder	Comment	PoM's response
IFCBAA	▪ Port users and other stakeholders are concerned how the treatment of deferred deprecation would affect them (p.3).	▪ PoM agrees that the treatment of deferred depreciation affects stakeholders and that the proposed approach needs to be carefully considered.

Stakeholder	Comment	PoM's response
	▪ Port Users and other stakeholders generally have a preference for a proposed model that minimises price shocks (pursue price stability) in recovering deferred depreciation (p.3) and that any proposed approach to recovering deferred appreciation needs to be considered carefully by PoM (p.4).	▪ The IFCBAA's view that Port Users and other stakeholders prefer a model that minimise price shocks is consistent with the feedback PoM had received to date on stakeholders' preferences. The approach PoM has adopted has been carefully considered and is specifically designed to minimise price volatility. ▪ We welcome the IFCBAA's comments on the approach to recovering deferred depreciation and consider that this supports the use of the tilted annuity approach. ▪ Given stakeholders' concerns about the impacts of deferred depreciation, PoM has provided updated projections of future tariff impacts in this TCS and we will continue to update projections at the commencement of future regulatory periods.
Patrick Terminals	▪ Patrick is … interested in the approach that PoM takes to deferring and ultimately recovering depreciation as it influences overall cost pressures in the system (p.21). ▪ It is very difficult to forecast the extent of the price shock with certainty from PoM's consultation materials. Whilst we acknowledge that PoM has provided additional information on its approach in the 2022 Industry Consultation Paper, it would be helpful if the illustrative profiles could also provide monetary levels for wharfage to give a feel for the likely annual step ups / step downs taking into account cumulative inflation year on year (p.20).	▪ In response to Patrick's suggestion, we have included illustrative profiles of containerised inward wharfage fees in this TCS. These fees are expressed in nominal terms so that Patrick and other stakeholders can better appreciate the impacts accounting for cumulative inflation. ▪ It is important to note that the level of nominal tariffs 16 years in the future is highly dependent on inflation, so these figures should be considered indicative only. However, by providing regular updates of forecasts at the commencement of each regulatory period, we consider that uncertainty regarding future tariff outcomes will be materially reduced.
DP World Australia	▪ DP World considers that the need for an alternative tariff profile to recover 'banked depreciation' after the end of the TAL period serves to highlight the impact of PoM's inefficiently high rate of return. ▪ If PoM's WACC had been set at an efficient level over the last five years, the ESC identifies that the balance of the depreciation account would already have started to be paid down. DP World has modelled that if PoM's rate of return is appropriately fixed at an efficient level over the next decade, there is unlikely to be any unrecovered, deferred depreciation –	▪ We note that DP World's comments relate to the WACC and the prudency and efficiency of expenditure as opposed to the depreciation approach itself. Without access to DP World's modelling of the rate of return we are not able to comment on the assertions around unrecovered depreciation, other than to note that this differs from the forecasts we have prepared as part of this TCS. ▪ Both the WACC and capital expenditure are addressed in detail in this TCS. WACC estimates during the review period had no impact on deferred depreciation or the RAB. As set out in Chapter 8, we consider that the WACC is compliant with the Pricing Order. Chapter 4 demonstrates that forecast

<table>
<tr><th>Stakeholder</th><th>Comment</th><th>PoM's response</th></tr>
<tr><td></td><td>and therefore no likely need to depart from straight line depreciation.
▪ If PoM continues to recover an inflated WACC, introduction of a tilted depreciation profile after the TAL period merely acts to 'mask' a banked over-recovery of returns by PoM – imposing a long term and inefficient burden on the Victorian economy for the remaining term of the lease. (p.20)
▪ DP World estimates that if the rate of return was reduced to an efficient level, the balance of the depreciation account would be fully recovered by the early-mid 2030s, avoiding any need for the kind of long term, tilted annuity arrangements being proposed in the TCS consultation (p.4).
▪ In these circumstances, DP World does not express a strong view as to whether a front-or back-loaded tilt is appropriate in respect of depreciation after the TAL period; and notes that the debate around a new future tariff profile after the TAL period to try to reduce tariff shock only serves to highlight that an inflated WACC is imposing costs on the Victorian logistics supply chain that will be entrenched for decades, unless steps are taken to more directly regulate PoM's rate of return (p.21).</td><td>expenditure for 2022-23 is prudent and efficient. We also note that:
– The compliance of the WACC with the Pricing Order has been addressed comprehensively in the Undertaking signed by the ESC Minister; and
– PoM's capital expenditure, RAB and depreciation were found to be compliant by the ESC in its 5-year review.
▪ The illustrative projections presented in the Consultation Paper and the TCS are based on a WACC that is estimated in accordance with the Pricing Order and is consistent with the approaches described in the Undertaking.
▪ We would welcome further consultation on these matters with DP World and would be pleased to address any outstanding questions not adequately covered by the TCS. For the avoidance of doubt, we note that matters regarding the design of the regulatory framework (such as fixing the rate of return and changing the approach to regulation) are matters for the Victorian Government.</td></tr>
</table>

11.3 Our approach

Having regard to stakeholder feedback received to-date, we consider that it is appropriate to continue to adopt the depreciation methodology as described in the 2021-22 TCS. Stakeholders have expressed a clear preference for an approach that minimises price volatility and this is the key principle that has informed PoM's approach.

At a high level, PoM's depreciation methodology is as follows:

- For the next regulatory period, and all subsequent regulatory periods during the TAL period, we will apply straight-line depreciation with an unrecovered depreciation account, with uncharged depreciation recorded as a separate asset with a life equal to the remaining lease term; and
- After the TAL period ends, a tilted annuity depreciation method will be applied with the tilt factor chosen at the time to minimise the variance in the expected annual percentage change in weighted average tariff increases until the end of the Port Lease.

This approach was informed by the views of stakeholders and independent advice from Incenta Economic Consulting (Incenta). Incenta advised PoM on alternative deprecation methodologies that were compliant with the Pricing Order in the lead up to the 2021-22 TCS. Incenta's report was submitted to the ESC as part of our 2021-22 TCS and is publicly available on the ESC's website.[87]

An explanation and justification for PoM's approach during and after the TAL period is provided below.

11.3.1 During the TAL period: straight-line depreciation with an unrecovered depreciation account

During the TAL period, any depreciation that cannot be recovered via straight-line depreciation will be formed into a separate financial asset with a deemed remaining life equal to the remaining term of the Port Lease. This approach was first adopted by PoM for the 2021-22 TCS. Prior to this, PoM had accounted for unrecovered depreciation by adding it back to the underlying asset classes within the capital base.

As advised by Incenta, this new approach is more transparent than adding depreciation back to the underlying assets. This approach also provides PoM with greater flexibility to smooth prices in the post TAL period because it has the effect of increasing the share of the capital base in long-lived assets at the conclusion of the TAL period.

This approach has been implemented in PoM's Regulatory Model by adding an additional asset class called the 'Deferred Depreciation Asset'. Depreciation on this asset is calculated in the same manner as all other assets within the capital base. The total of all unrecovered depreciation from a given year is added to the closing balance of the Deferred Depreciation Asset for that year with an asset life equal to the remainder of the Port lease term.[88]

11.3.2 After the TAL period: tilted annuity depreciation

At the conclusion of the TAL period, PoM will switch from straight-line depreciation to 'tilted annuity' depreciation for all asset classes.[89] The tilted annuity method (Box 2, below) is based on the following formula, where depreciation for a given year and asset is derived by multiplying the opening written down value of the asset for that year by the depreciation rate:

$$Dep_{ij} = \left(1 - \left(\frac{(1+r_i)^{L_{ij}-1} - (1+t)^{L_{ij}-1}}{(1+r_i)^{L_{ij}} - (1+t)^{L_{ij}}}\right) \times (1+r_i) \times (1+t)\right) \times (1+CPI_i)$$

Where:

Dep_{ij} is the depreciation rate for year i, asset j

r_i is the real discount rate for year i (the pre-tax real WACC)

t is the tilt rate

L_{ij} is the remaining life of the asset j as at the beginning of year i

CPI_i is CPI inflation for year i

The effect of applying a tilted annuity method is that the depreciation allowance is derived such that the sum of the return on capital and return of capital for each asset grows over time at a pre-set 'tilt' rate. The advantage of this method is that the tilt rate can be set such that the growth in the total capital charge roughly aligns with growth in demand, and depreciation recovery can therefore be spread over time in a manner that smooths price outcomes.

[87] See Port of Melbourne compliance with pricing regulations | Essential Services Commission

[88] Refer to PoM's updated Regulatory Model User Guide provided with the 2022-23 TCS for further details.

[89] Consistent with Incenta's advice, PoM considers that it would be undesirable to switch to the tilted annuity method prior to the conclusion of the TAL period because this would have no impact on the total capital base at the conclusion of the TAL period, but it would reduce the amount of depreciation which accrues in the deferred depreciation asset and therefore reduce the share of the capital base in long-lived assets at the conclusion of the TAL period. This would reduce PoM's ability to smooth prices in the post TAL period.

Incenta's independent analysis demonstrates that this approach meets the Pricing Order requirement (4.4.2(b)), as it is reasonably likely to reduce the variance in the expected annual percentage changes in the level of prices through to the end of the Port Lease (relative to a straight-line depreciation methodology of the sort described in clause 4.1.1 of the Pricing Order).

In fact, PoM's analysis (section 11.5) suggests a tilted annuity method would *reduce* price volatility in the post TAL period relative to a straight-line method under a wide range of tilt rate assumptions, and therefore meet the requirements of the Pricing Order for an alternative depreciation methodology under clause 4.4.2(b). However, consistent with the preferences of stakeholders, PoM intends to go further than required under the Pricing Order and choose the tilt rate that *minimises* expected price volatility over the remainder of the Port Lease.

PoM's regulatory model has been updated to incorporate a tilted annuity method in the post TAL period, with a tilt rate set to minimise the variance in the expected annual percentage change in weighted average tariff increases until the end of the Port Lease. As calculating this 'optimal' tilt rate depends on projecting many uncertain variables, PoM will update this tilt rate over time. For example, in the post TAL period, the tilt rate that minimises expected price volatility could be re-estimated at the beginning of each new regulatory period. However, given the TAL period will not end for another 10-15 years, consistent with the principle of timely engagement, PoM intends to revisit the specifics of implementation closer to the conclusion of the TAL period.

Box 2 — What is tilted annuity depreciation?

The tilted annuity method calculates the depreciation of an asset over its useful life such that the 'total capital charge' (the sum of the return on, and return of, capital) grows at a selected 'tilt rate'. By contrast, under the straight-line method, an asset is depreciated by an equal amount each year over its useful life.

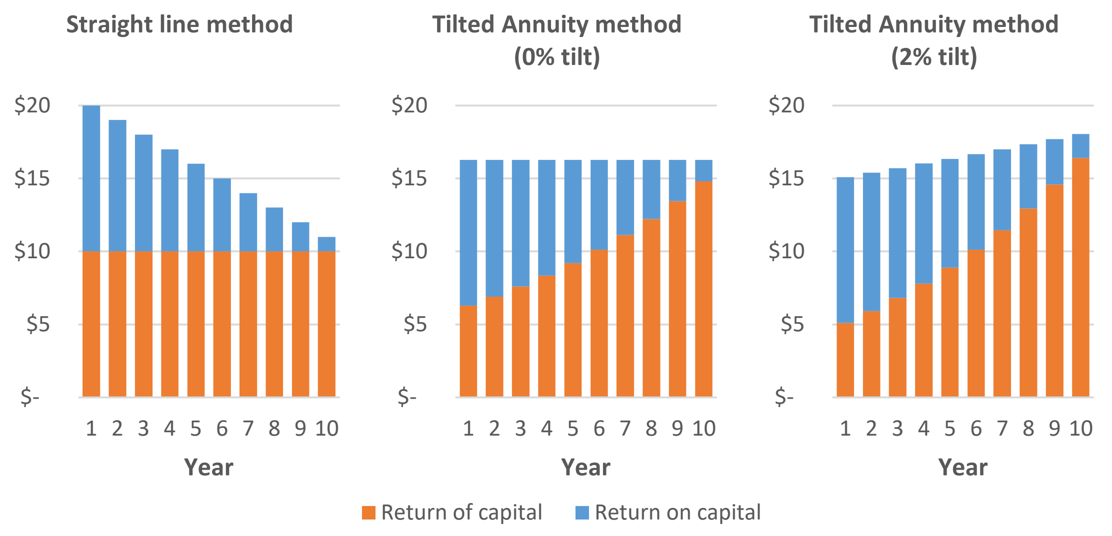
For example, consider an asset of $100 with a useful life of 10 years, with a 10% rate of return on capital.

Under the straight-line method, the return of capital is the same in each year. The total capital charge decreases over time as the capital base is quickly depreciated and the return on capital declines.

Under the tilted annuity method with a 0% tilt rate, the return of capital is set so that the total capital charge is constant over the life of the asset. As the return of capital increases over time, the return on capital decreases. This is analogous to a typical 'principal plus interest' loan repayment where the total repayment (the 'total capital charge') is constant over time, because the principal component (the 'return of capital') of the repayment increases while the interest component (the 'return on capital') declines.

Under the tilted annuity method with a 2% tilt rate, depreciation is set such that the total capital charge increases at 2% each year. Compared to the 0% tilt rate, the return of capital is smaller in early years and the return on capital larger, but the return of capital grows more quickly resulting in a growing total capital charge.

In each case, the net present value of the depreciated capital is the same (i.e. the same amount of capital is recovered and the total payments are equal in NPV terms), but the profile of recovery is different.



11.4 Projections

This section presents projections of the potential impacts of PoM's approach to deferred depreciation recovery on the recovery of PoM's capital base and future tariffs. Most of the figures below were also presented in the Consultation Paper, however they have been updated to accommodate the latest data, and some additional detail on tariff impacts is presented at stakeholder request.

As discussed in the Consultation Paper, calculating these impacts requires projecting a number of uncertain variables to the end of the Port Lease period (2066). Among the many uncertain variables are inflation, the cost of capital (and interest rates), capital and operating expenditure, and trade volumes. In order that the illustration of potential future impacts of alternative depreciation recovery profiles is as meaningful as possible, we have sought to adopt realistic assumptions that we consider reflect a feasible future state. However, given the number of variables involved and long time horizons, there are a myriad of possible future outcomes, and these projections represent just one of many possible future states. These projections should be considered illustrative only and should not be relied upon for any other purpose.

PoM will present updated projections at the commencement of each regulatory period so stakeholders are informed about the potential impact of the deferred depreciation balance and its recovery on future tariffs.

11.4.1 Projected depreciation recovery

Figure 14 provides an indicative projection of PoM's annual capital charge (the sum of the return on capital and return of capital) under the adopted approach to depreciation recovery **(a)**, and an alternative approach where depreciation is recovered via the straight-line method in the post TAL period **(b)**:

- On current projections, only a small amount of PoM's capital base will be recoverable via tariffs during the TAL period. Due to the operation of the TAL, unusually high inflation in 2022 allows for the partial recovery of PoM's straight-line depreciation in 2022-23. However, assuming inflation returns to a level more consistent with the RBA's target range in coming years, recovery of straight-line depreciation during the TAL period is not projected to continue beyond 2023-24.
- Consistent with the example in Box 2, adopting a tilted annuity approach to the return of capital in the post TAL period **(a)** enables PoM to reduce the total capital charge component of the revenue requirement in the years immediately after the expiry of the TAL.
- By contrast, if PoM chose to continue to recover depreciation via a straight-line approach in the post TAL period **(b)**, the capital charge would increase sharply in 2038, and then gradually decline until the end of the Port Lease.
- While the adopted approach results in a total cumulative capital charge which is larger in nominal terms, it is the same under either methodology when expressed in net present value (NPV) terms. PoM's choice of depreciation methodology does not impact the total amount paid by Port Users (in aggregate, NPV terms), only the timing and profile of cost recovery.

Figure 14: PoM's projected capital charge under the adopted approach and straight-line approach

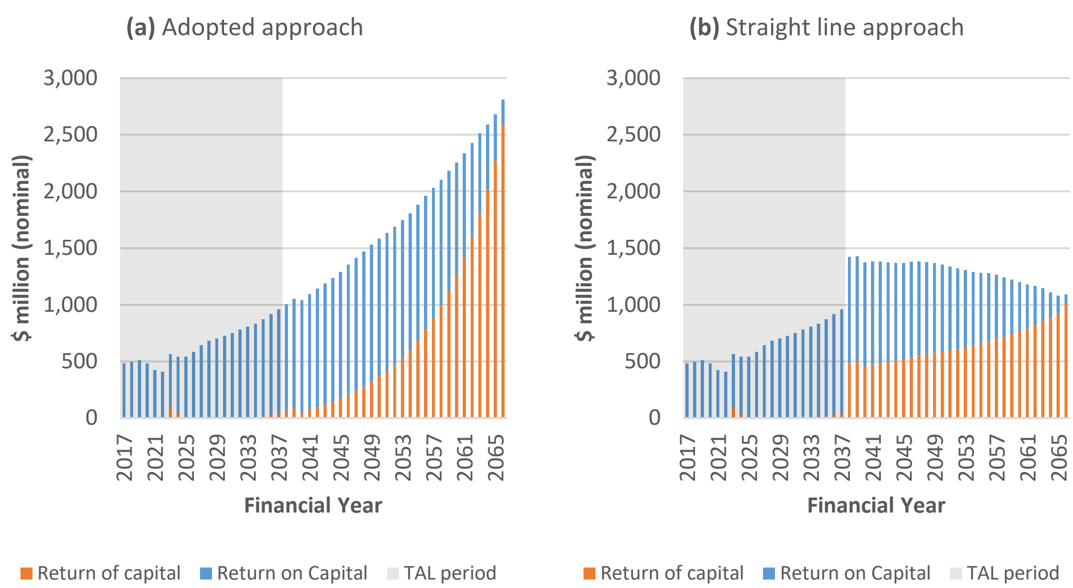
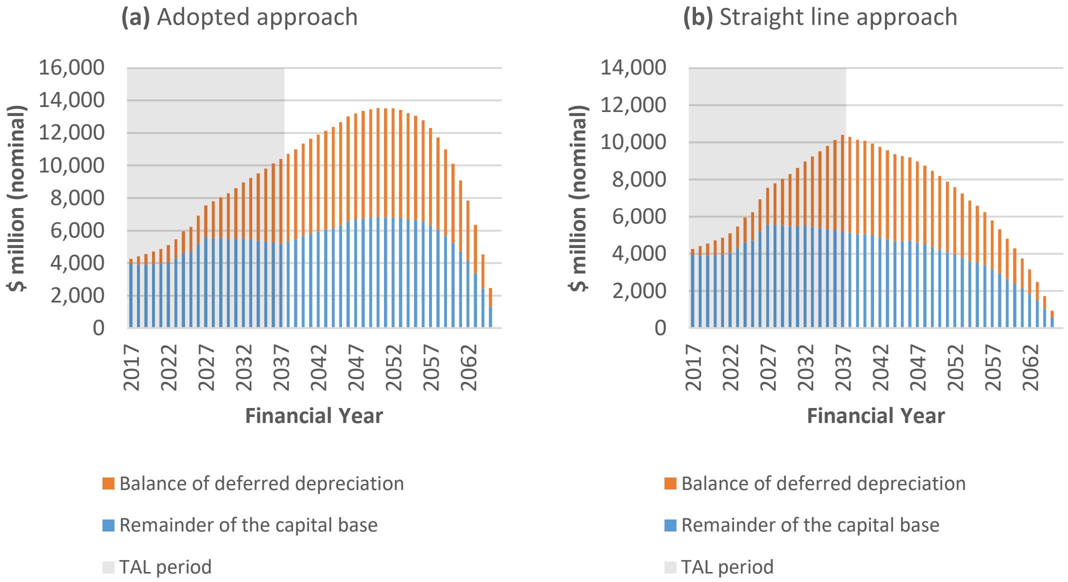


Figure 15 provides an indicative projection of PoM's closing capital base under the adopted approach to depreciation recovery **(a)**, and an alternative approach where depreciation is recovered via the straight-line method in the post TAL period **(b)**:

- On current projections, PoM's capital base is projected to be around $10 billion in nominal terms at the conclusion of the TAL period (assumed to be 2037), with the deferred depreciation balance constituting roughly half of this total.
- Under the adopted approach **(a)**, we project PoM's capital base will continue to grow in nominal terms until around 2050 as capital additions and indexation outpace the return of capital. After about 2050, the capital base declines as the return of capital increases.
- By contrast, if PoM chose to continue to recover depreciation via a straight-line approach in the post TAL period **(b)**, we project that PoM's capital base would peak in 2037 at the conclusion of the TAL period, and decline across the remainder of the Port Lease.

Figure 15: PoM's projected closing capital base under the adopted approach and straight-line approach



11.4.2 Potential tariff impacts

Figure 5 provides an indicative projection of future tariffs under the adopted approach and an alternative approach where depreciation is recovered via the straight-line method in the post TAL period.[90] As shown in the figure:

- Tariffs are projected to remain constant in real terms (i.e. increase at the rate of inflation) for the remainder of the TAL period;
- Under the adopted approach, tariffs are projected to decline slightly in inflation-adjusted terms in the post TAL period; and
- By contrast, if a straightline approach were applied in the post TAL period, inflation-adjusted tariffs would increase sharply post TAL, before steadily declining over the post TAL period.

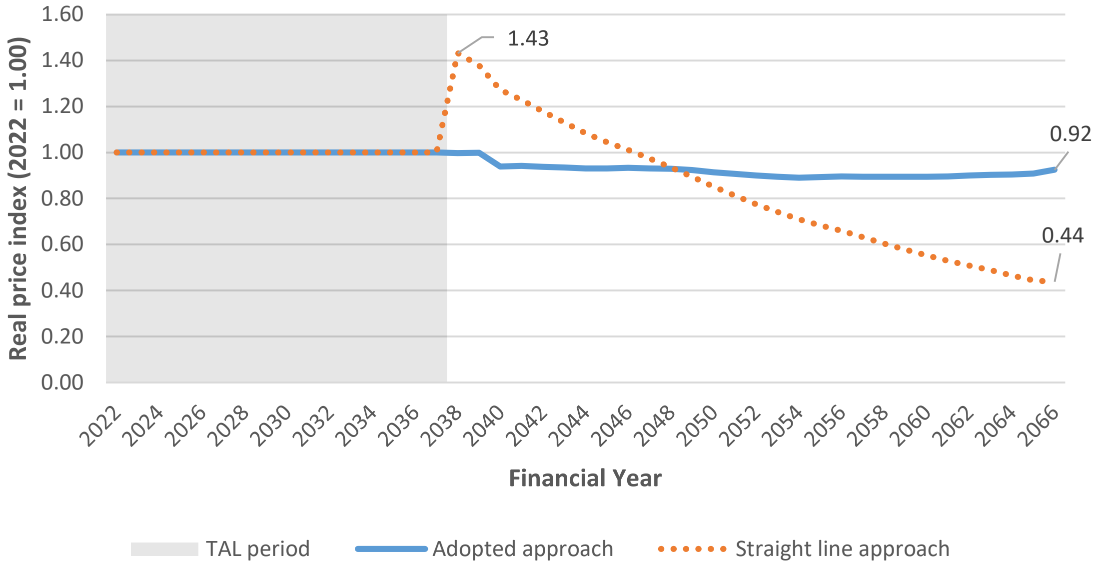
Deferring depreciation recovery to later in the Port Lease provides tariff control because costs can be spread across higher trade volumes, reducing the price impact on customers.

[90] The projected tariffs in this figure are slightly lower than those presented in the Consultation Paper. The primary driver of the difference is an upwards revision in projected inflation in the near term. This increases tariffs during the TAL period, which in turn increases the recovery of depreciation during the TAL period. Consequently, the balance of deferred depreciation to be recovered at the conclusion of the TAL period is slightly lower and therefore tariffs in the post TAL period are lower. A slight upwards revision to trade volume projections also contributes to lower post TAL tariffs.

The adopted approach results in a relatively flat tariff profile because the growth in the 'tilt rate' (which determines the rate of growth in the sum of the return on capital and the return of capital) can be set to broadly match the growth in demand. That is, rather than a step up (and then decline) in the revenue requirement as would occur post-TAL under the straight-line approach, the growth in the revenue requirement under the adopted approach is set to minimise the variance in annual percentage tariff changes over the post TAL period.

As described in section 11.3, the Pricing Order requires that an alternative depreciation methodology is reasonably likely to reduce the variance in expected annual percentage changes in tariffs through to the end of the Port Lease (relative to the 'default' approach of straight-line depreciation). As the tariff profiles in Figure 16 demonstrate, the adopted approach clearly meets this requirement (discussed further in section 11.5).

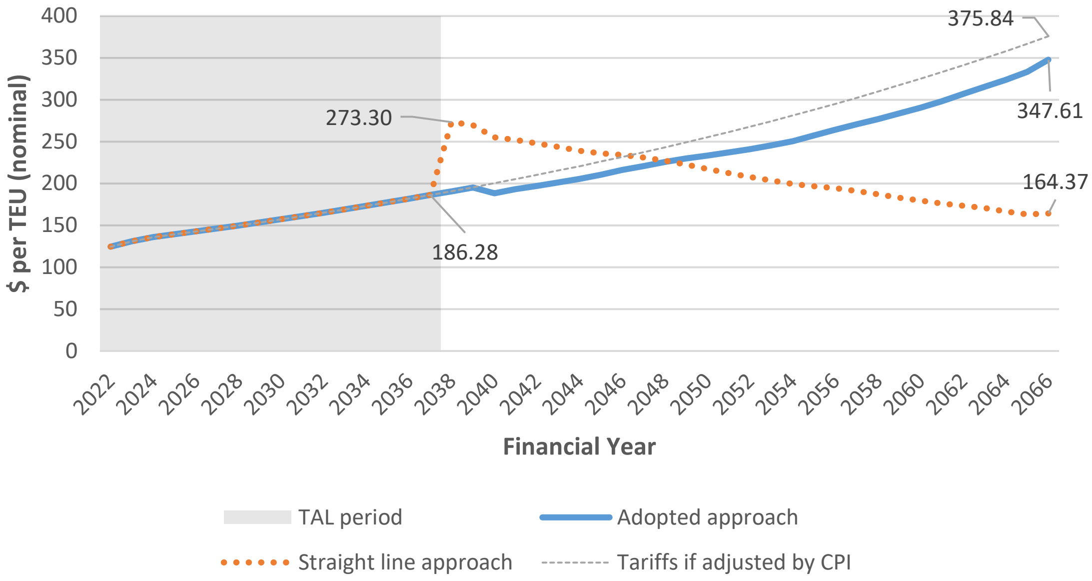
Figure 16: Projected real tariff index under the adopted approach and straight-line approach



To illustrate the impact on actual tariffs, Figure 17 provides an indicative projection of the containerised (full inward) wharfage fee under the adopted approach and the straight-line approach, expressed in nominal terms (i.e. not adjusted for inflation). This projection assumes all tariffs are increased at the same rate in the post TAL period:

- Under the adopted approach, the fee increases by 2 per cent in 2038, and rises fairly steadily during the post TAL period at a rate less than inflation (i.e. a real price reduction)
- Under the straight-line approach, the fee increases by 47 per cent in 2038 at the conclusion of the TAL period, before steadily declining over the post TAL period.
- While the adopted approach is projected to result in a significantly higher fee by the conclusion of the Port Lease, the total amount of prescribed revenue recovered across all tariffs over the Port Lease is the same under either approach in net present value terms.
- By contrast, under the straight-line approach, the fee is lower in nominal terms in 2066 (the last year of the Port Lease) than it was thirty years prior. This reduction is made possible by the substantial increase in the fee at the expiry of the TAL.

Figure 17: Projected containerised (full inward) wharfage fees under the adopted approach and straight-line approach (excl. GST)



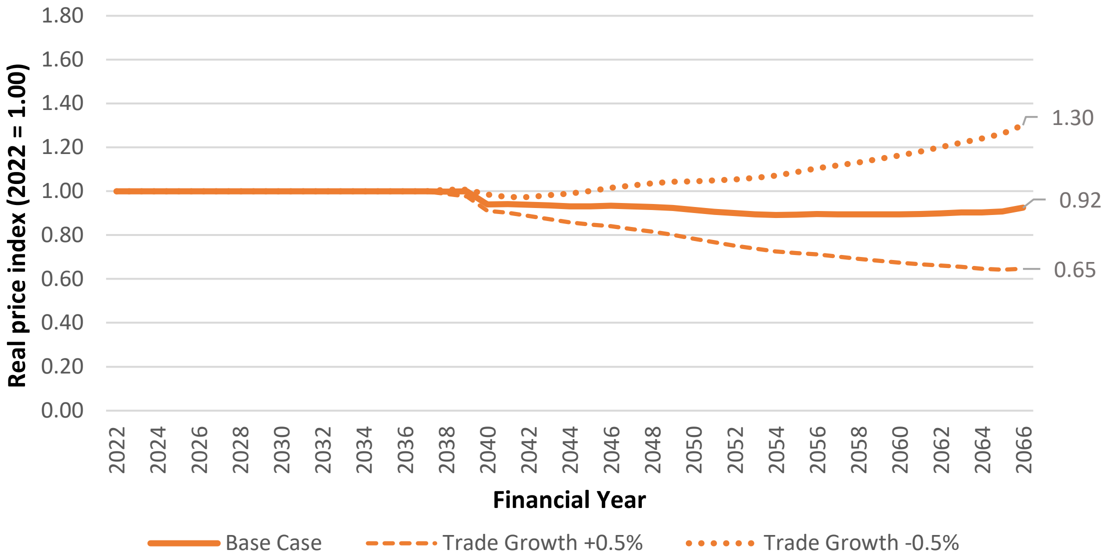
11.4.3 Sensitivity analysis

To consider the implications of forecasting uncertainty, we have undertaken a range of sensitivity tests to identify key factors that could result in different outcomes under the adopted approach. Our analysis confirms that projections of tariff profiles are sensitive to changes in many underlying variables. Two of the most important variables are the level of demand (and demand growth) and the cost of capital (WACC).

For example, using the adopted approach, if demand growth for each tariff category were 0.5 percentage points *lower* each year from 2023 to 2066 than in the analysis underlying the projections above, tariffs could be 30 per cent *higher* than current levels in inflation adjusted terms by 2066. On other hand, if demand growth for each tariff category were 0.5 percentage points *higher* each year than in the analysis underlying the projections above, tariffs could be 35 per cent *lower* than current levels in inflation adjusted terms by 2066 (Figure 18).[91] In other words, while the adopted approach reduces price volatility, it does not guarantee that prices will stay constant in inflation adjusted terms.

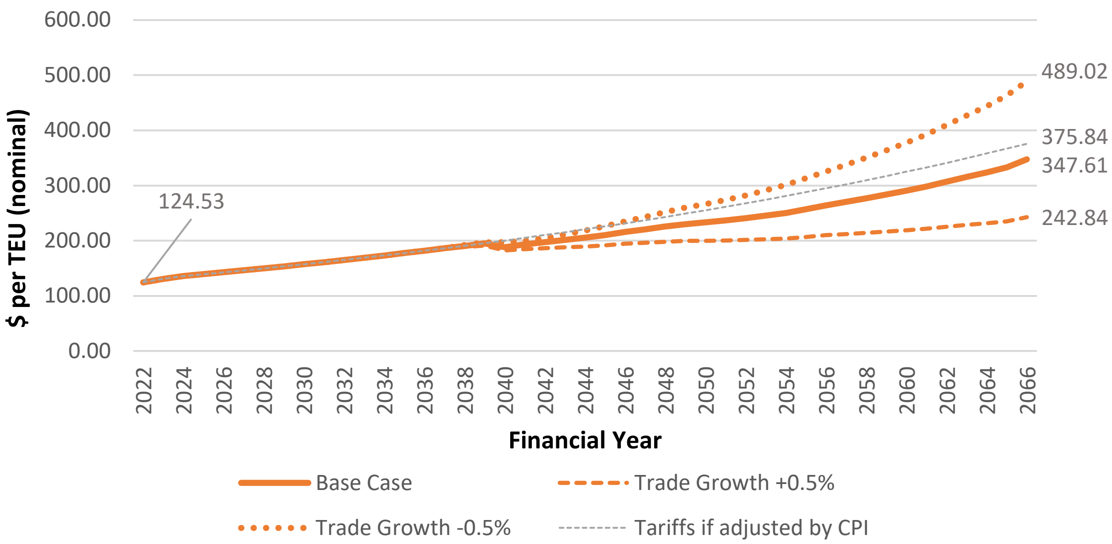
[91] This analysis does not take into any changes to capital or operating expenditure required as a result of demand that is higher or lower than projected in the base case. To the extent that higher (lower) than projected demand in the post TAL period requires more (less) expenditure than the base case this may lead to a higher (lower) tariff profile than this sensitivity analysis implies.

Figure 18: Projected real tariff index under different demand projections



To illustrate the impact on actual tariffs, Figure 19 provides an indicative projection of the containerised (full inward) wharfage fee under these different demand projections. The substantial differences in tariffs at 2066 give an indication of the uncertainty inherent in projecting tariff profiles over long time periods.

Figure 19: Projected containerised (full inward) wharfage fees under different demand projections (excl. GST)



11.5 Compliance with the Pricing Order

Under section 4.4.2(b) of the Pricing Order, PoM may only adopt an alternative to the straight-line depreciation methodology at the conclusion of the TAL period if 'that alternative methodology is reasonably likely to reduce the variance in the expected annual percentage changes in the level of Prescribed Services Tariffs through to the end of the Port Lease'. PoM's adopted approach is compliant with this requirement.

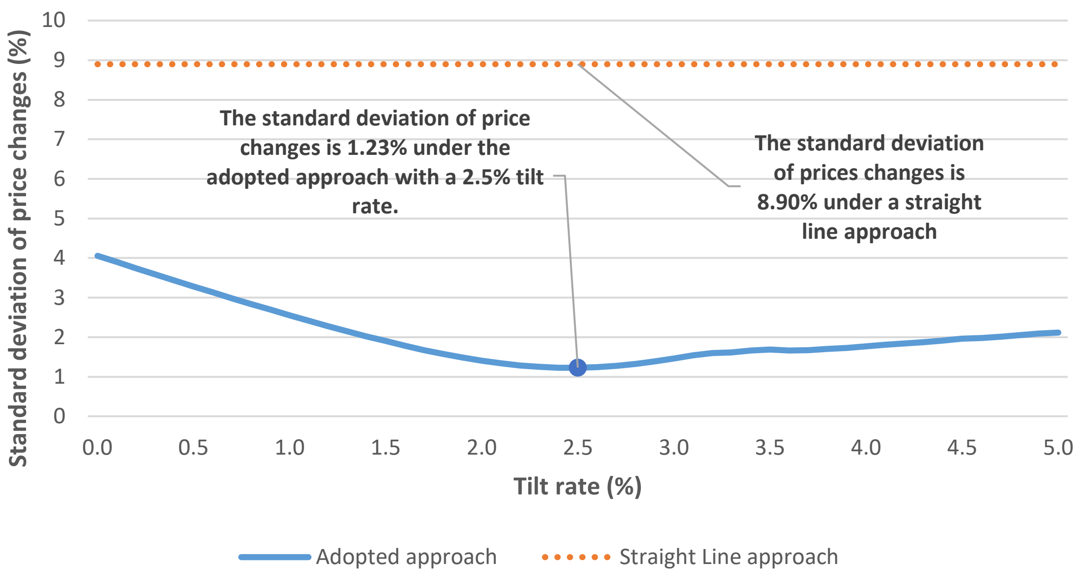
To demonstrate compliance, we have calculated descriptive statistics for the nominal expected annual percentage changes in revenue weighted average tariffs in the post TAL period (2038 to 2066) based on the central projection above (Table 33). The results demonstrate that the likely variance in post TAL prices changes is far lower under the adopted approach than under a straight-line approach. Under the adopted approach (with a tilt rate of 2.5%), the standard deviation of annual percentage price changes is 1.2 percentage points. By contrast, under a straight-line approach, the standard deviation of annual percentage price changes is 8.9 percentage points. [92]

Table 33 Descriptive statistics for projected post TAL annual percentage price changes – adopted approach vs straight-line approach (expressed in nominal terms)

Measure	Adopted Approach	Straight-line Approach
Minimum	-3.7%	-5.4%
Maximum	4.3%	46.7%
Range	8.0%	52.1%
Standard deviation	1.2%	8.9%

As described above, under the adopted approach, the tilt rate used in tilted annuity depreciation calculations is set to minimise the standard deviation of post TAL prices. However, we note that a range of tilt rates would result in a standard deviation of post TAL prices well below that implied by the straight-line approach, and therefore would be compliant with the Pricing Order requirement to reduce annual price variation relative to a straight-line approach (Figure 20).

Figure 20: Standard deviation of post TAL price changes under the adopted approach by tilt rate



[92] Standard deviation is the square root of variance. The Pricing Order refers to variance, but standard deviations are presented here because interpretation is simpler. The tariff profile with the lowest standard deviation will also always have the lowest variance.