always powering ahead

Directlink

Stakeholder Meeting 3: Operating expenditure and other matters

8 November 2023

I’d like to begin by acknowledging the Traditional Owners of the land on which we all meet from today and pay my respects to Elders past, present and emerging.

Welcome and purpose

Objective: To set the scene for the meeting.

Agenda for today's meeting

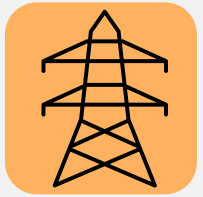
Activity	Lead	Time
Welcome and purpose	Paul Alexander, General Manager Asset Management APA Group	10:00am – 10:05am
Circle back - Capital expenditure options for the 2025 to 2030 period	Annie Martyn, Asset Manager, APA Group	10.05am – 10.40am
Regulated asset base, depreciation and return on capital	Angelica Austin, Regulatory Specialist, APA Group	10.40am – 10.50am
Operating expenditure for the 2025 to 2030	Mark Allen, Senior Regulatory Manager, APA Group	10.50am – 11.35am
Capital Expenditure Sharing Scheme (CESS)	Mark Allen, Senior Regulatory Manager, APA Group	11.35am – 11.45am
Other topics - Cost pass through and pricing methodology	Mark Allen, Senior Regulatory Manager, APA Group	11.45am – 11.55am
Wrap up and thanks	Mark Allen, Senior Regulatory Manager, APA Group	11.55am – 12.00pm

Circle back - Capital expenditure options for the 2025 to 2030 period

Objective: To update stakeholders on progress and seek views on capital expenditure options for the 2025 to 2030 regulatory period

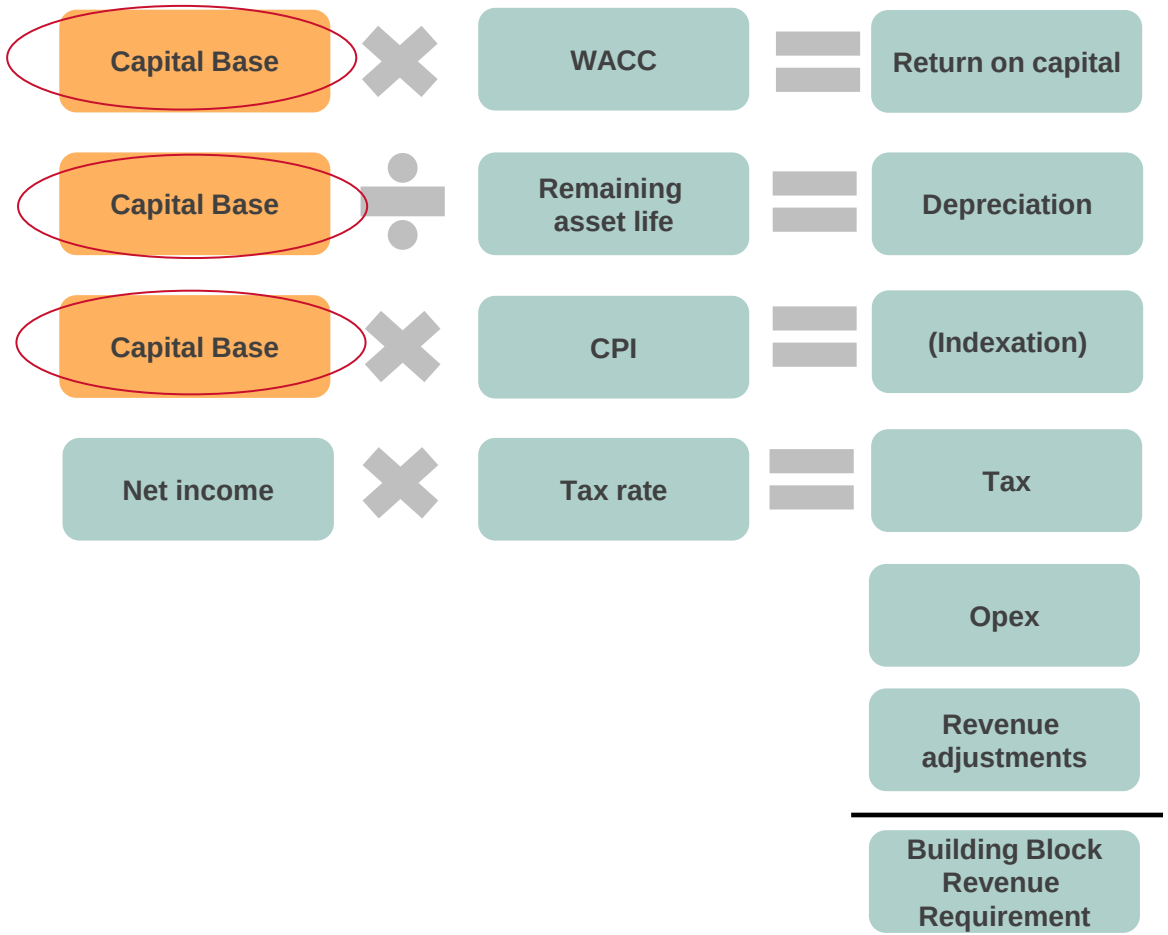
But first, an analogy

How does a buying a house compare to investing in Directlink?

		
What is the asset?	House	Regulated asset base
What are the Improvements / additions to the asset?	Upgrading a bathroom / extension	Capital expenditure
What is maintenance on the asset?	General repairs / mowing the lawn	Operating expenditure
How does financing work for the asset?	Home loan – Principal	Depreciation
	Home loan - Interest	Return on capital

Recap - Understanding the regulatory building blocks

Building block



How capital expenditure affects revenue?

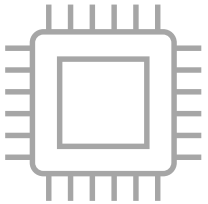
- Capital expenditure is money used to purchase, upgrade or extend the life of an asset
- They are long term investments meaning:
  - they have a life of more than one year; and
  - are paid for by customers over the life of an asset
- Capital expenditure is added to the existing capital base - otherwise known as the Regulated Asset Base (RAB)
- The RAB affects:
  - the return on capital
  - depreciation
  - indexation

Progress since our last meeting

Capital expenditure overview 2025 - 30







Decision range for projects identified was is $11.3M to $21.5M

1. Safety and protection	2. Asset monitoring	3. Major maintenance	4. Spares management	5. Insulated-gate bipolar transistors (IGBTs)
~$83k to $2.1M	~$0 to $1.3M	~$2.3M	~$3.3M to $10.2M	$5.6M Outcomes of RIT-T

Updated estimates plus additional projects/ expanded scope identified since the last meeting

plus ~$2.1M (Additional site security, electrical components upgrade related to safety)	**less ~$200k** (Maintenance of existing systems, improvements to the asset management system)	**plus ~$4.0M** (Additional cooling system and major structural components work)	**Work in progress**	**No change**

1. Safety and protection

Last meeting

Safety and protection

Site security improvement
Landslip risk management

~$83k to $2.1M

Outstanding questions from our last meeting	Our proposed way forward
Should the upgrade in fencing reduce insurance premiums?	There is a small reduction in insurance costs, however this is significantly offset by increases in insurance costs more generally (discussed later in opex)
Is there an issue of potentially paying twice if the landslip upgrades don't last the life of the asset?	The current solutions have been designed to cater for situations that have historically occurred. There is always a risk that the solution does not withstand unprecedented climate events.
Would this upgrade and the prevention of future landslips save any costs on opex?	The opex for this is normally just monitoring so there are no further cost savings identified.

Additional projects

- Motorisation and relocation of isolation switches
- Arc flash study and mitigation
- Power transformer sound wall earthing
- Additional site security for converter station

+$2.1M

Proposed way forward

Safety and protection

Option 2

- ✓ Improve fencing
- ✓ Install CCTV
- ✓ Install support systems in high-risk landslip areas
- ✓ Electrical upgrades

Capex

$4.2M

Opex

-$50k per annum for site security avoided cost

2. Asset Monitoring

Last meeting

Asset monitoring

Control system upgrade to master controller

~$0
to
$1.3M

Questions from our last meeting	Our proposed way forward
Will there be a performance change under a master controller? Does it need the approval of the AER and AEMO?	It is in the very early stages of being considered as an option. It would need AEMO's approval.
Would the upgrade mean that it would be monitored live, so issues could be addressed in real time?	The master controller does not offer increased monitoring. It is expected to deliver reliability and efficiency improvements by transferring power through less systems. *For example, if AEMO require 33% capacity, this is done through one system at full capacity and 2 are offline/.*

Additional projects

- Existing control, protection and telecoms equipment upgrade
- Includes fibre cables, RTUs interface to Essential Energy and AEMO
- Propose to conduct detailed engineering study by third party to assess OEM's proposal for master controller

-$200k

Proposed way forward

Asset monitoring

- ✓ Feasibility study only - control system upgrade to master controller
- ✓ General maintenance and upkeep of existing control systems

$1.1M

3. Major maintenance

Last meeting

3. Major maintenance

Circuit breakers, fire system, cooling system and major structural component upgrades

~$2.3M

Questions from our last meeting	Our proposed way forward
Do other secondary systems such as AC protection panels, secondary wiring and RTUs need maintenance? Are there any issues or condition monitoring on the UG cable on the Terranora side?	APA have reached out to Essential Energy to discuss the more technical aspects in further detail. There is RTU/comms improvement scope included in asset monitoring. There is currently no proposed capital expenditure for underground AC cable as no faults have been observed in last 25 years of operation.

Additional projects / Expanded scope items

- Cooling system upgrade expanded to included reactor cooling system, pump and motor upgrade
- Major structural components expanded to include cable works

+$4.0M

Proposed way forward

3. Major maintenance

- ✓ Circuit breakers
- ✓ Fire system
- ✓ Cooling system and
- ✓ Major structural components

~$6.3M

Numbers may not add due to rounding

4. Spares management

Last meeting

4. Spares management

Cables and dry HED capacitors

~$3.3M to $10.2M

Question	Response
Do consumers today want to pay for the benefit of consumers later on?	**We will be discussing principles for spare management in the next slide to explore this question further.**
Is there was another market that left over spares could be sold to?	There is unlikely to be any use for left over spares, other than scrapping value.

Proposed way forward

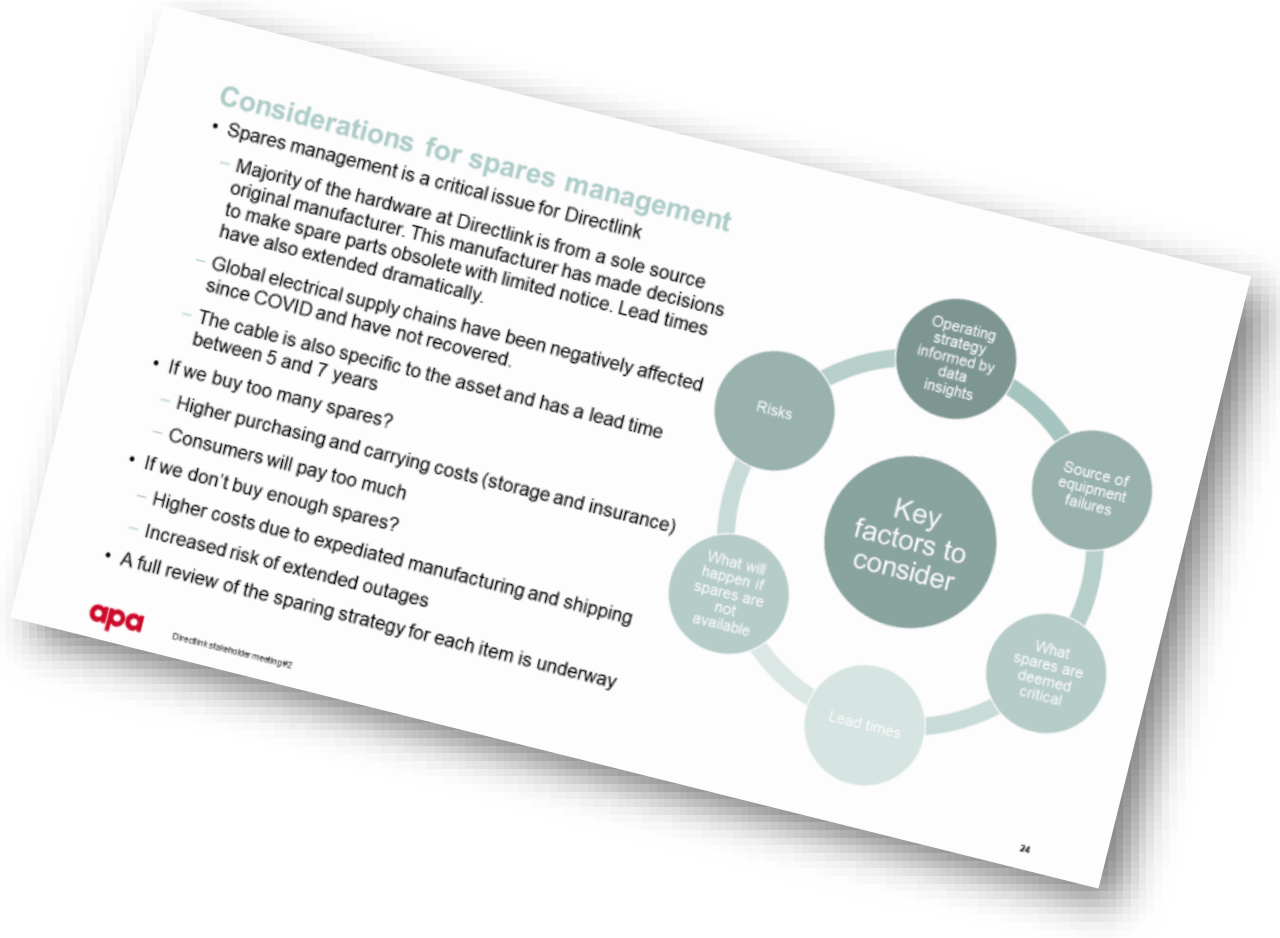
4. Spares management

✓ Work in progress

~$3.3M to $10.2M

Spares strategy – preferences

- Our approach to spares management needs careful consideration given it is a critical issues and risk for the next regulatory period and beyond
- As a result, work on the spares strategy will continue through to the AER's Draft Determination
- Balancing all of the risks involves conducting risk assessments, considering the age and type of equipment, industry standards and regulations, and **customer expectations**



Spares strategy – preferences

Pros

Lower upfront costs, reduced storage requirements.	**Reliability**	Enhanced reliability with quick access to replacements, minimal outages.
Lower initial investment and storage costs.	**Customer**	Improved customer satisfaction and reduced customer risk.
Reduced risk of obsolescence, as fewer spares may become outdated.	**Obsolescence**	Lower risk of part unavailability due to having diverse spares.

Pros

Less spares

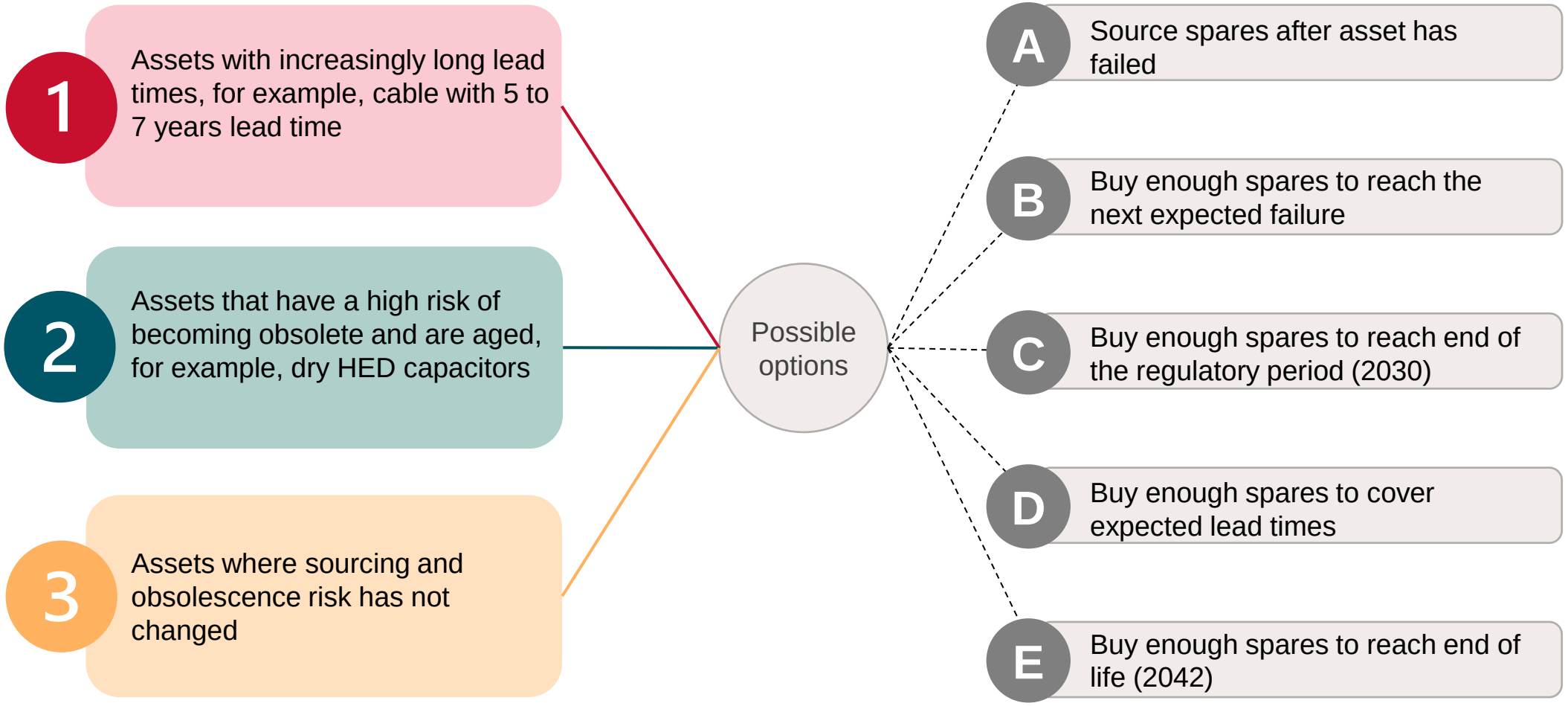
More spares

Cons

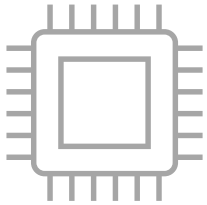
Unexpected failures may result in prolonged outages, repair delays, and potentially costly emergency replacements.	**Reliability**	Increased initial investment and ongoing storage costs, potential capital tied up in unused spares, and the risk of spares becoming obsolete.
Increased risk of prolonged outages and higher costs if upgrades or major replacements are required.	**Customer**	Higher initial investment and storage costs, potential capital tied up in unused spares, and the risk of spares becoming obsolete. Today's customers may not receive the potential future benefits.
Greater vulnerability to part unavailability, especially for older equipment, which may require costly upgrades or replacements.	**Obsolescence**	Increased risk of excess spares becoming obsolete and unusable.

Cons

Spares strategy options for feedback



5. Insulated-gate bipolar transistors (IGBTs)

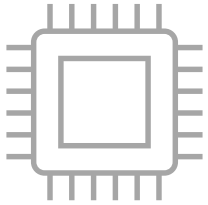


5. Insulated-gate bipolar transistors (IGBTs)

$5.6M

Outcomes of RIT-T

No change



5. Insulated-gate bipolar transistors (IGBTs)

$5.6M

Outcomes of RIT-T

Proposed way forward

Capital expenditure overview 2025 - 30

1. Safety and protection

$4.2M

2. Asset monitoring

$1.1M

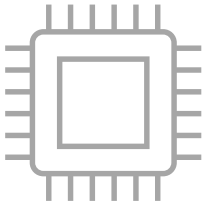
3. Major maintenance

~$6.3M

Work in progress

4. Spares management

~$3.3M to $10.2M



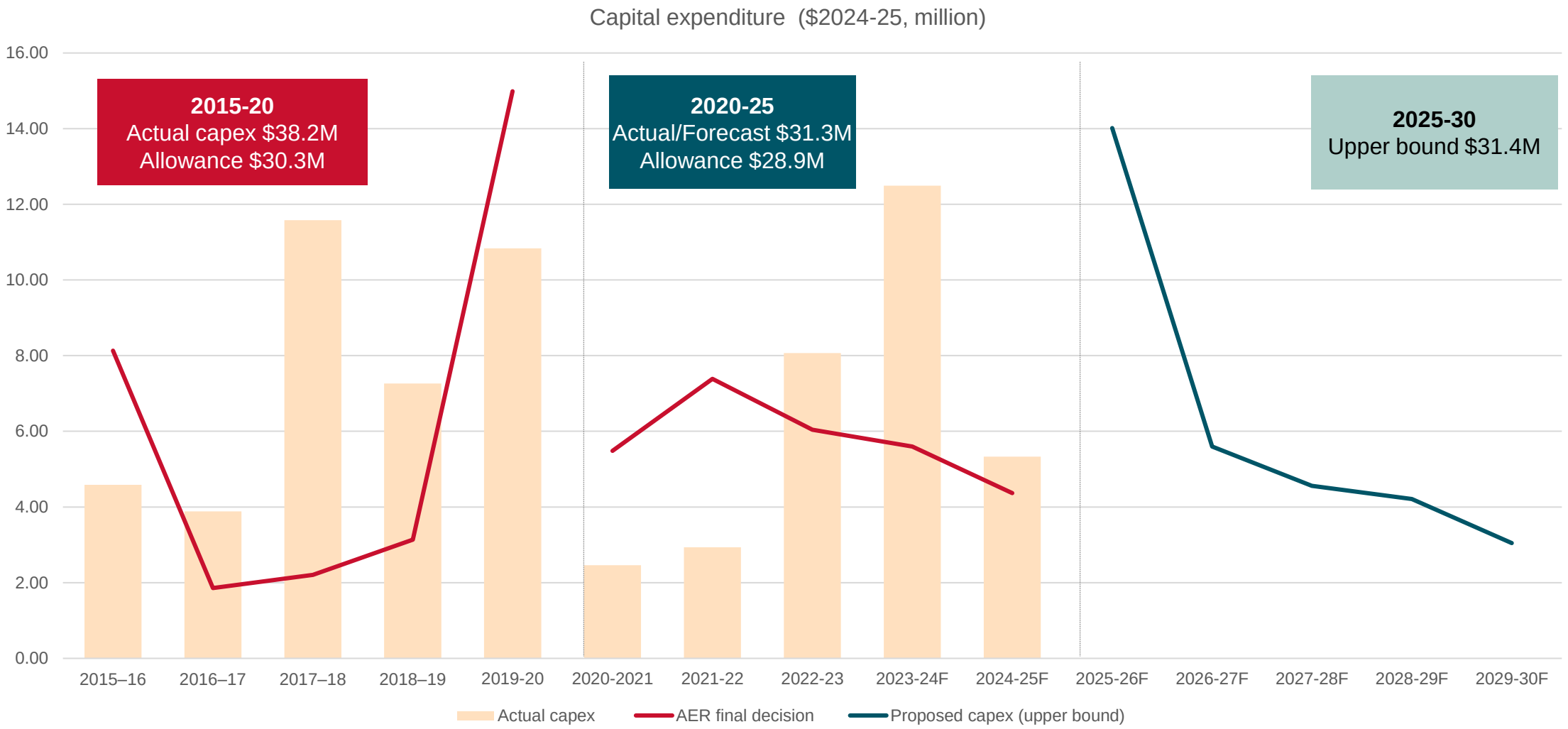
5. Insulated-gate bipolar transistors (IGBTs)

$5.6M

Plus labour escalation, project management costs and margin

$5.0M	$1.5M	~$8.6M	Work in progress	$6.1M

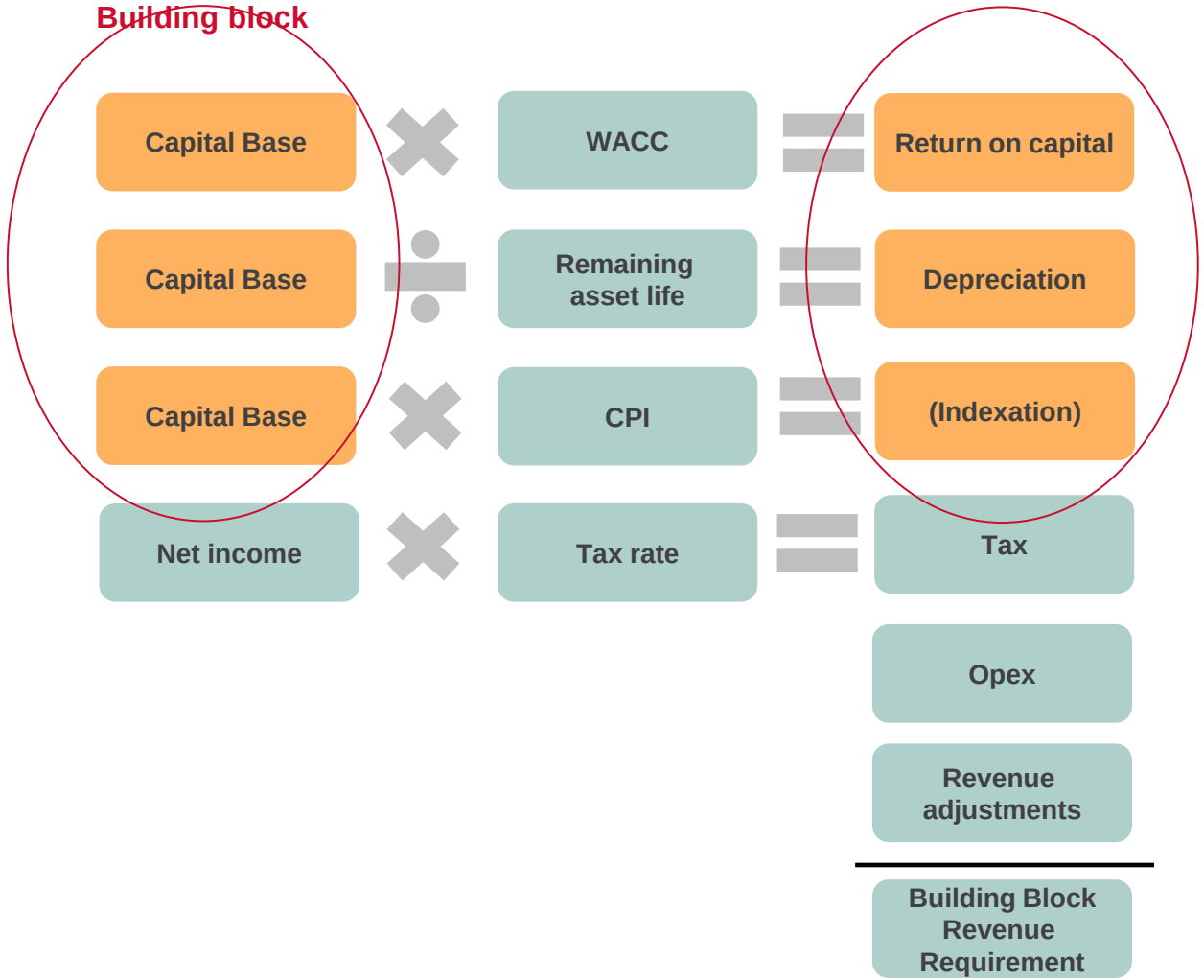
Directlink's capital expenditure – draft forecast



Regulated asset base, depreciation and return on capital

Objective: To inform stakeholders on the regulated asset base, depreciation and return on capital for the 2025 to 2030 regulatory period

Understanding the regulatory building blocks

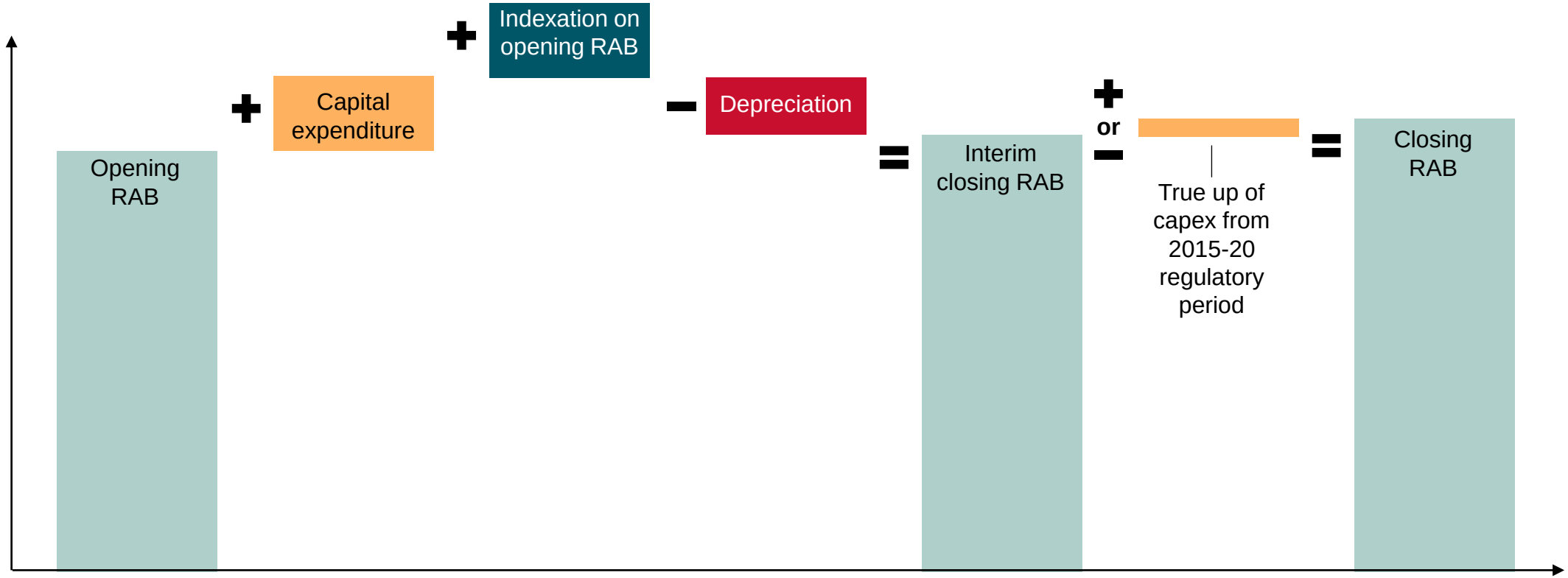


How the regulated asset base, depreciation and return on capital affect revenue?

- Capital expenditure is added to the existing capital base - otherwise known as the Regulated Asset Base (RAB)
- The RAB substantially impacts revenue because it is a key input into the calculation of:
  - the return on capital
  - depreciation
  - indexation
- Increases in the RAB generally means that both the return on capital and depreciation will also increase

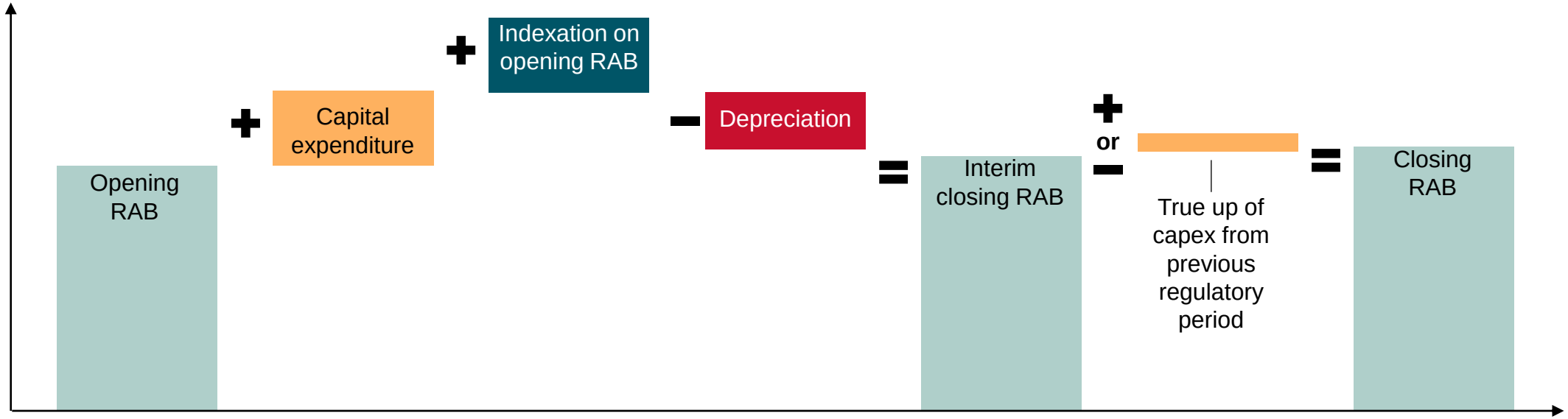
How is the regulated asset base (RAB) calculated?

The RAB is calculated using the AER's RAB roll forward model



2020-25 Directlink final determination Forecast RAB *($M, nominal)	$146.9M	+	$27.7M	+	$17.1M	−	$39.5M	=	$152.2M	−	+/- $?M	=	$152.2M

Indicative RAB for 2025-2030



2025-30 Indicative outcomes								
$152.7M	+	$34.1M	+	$24.2M	−	$61.3M	=	$149.7M

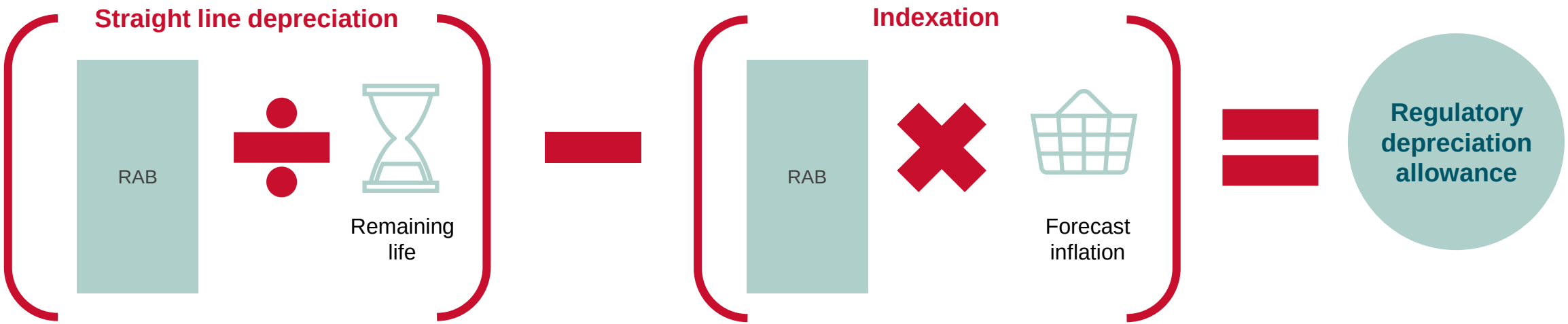
Depreciation and indexation

What is depreciation?

Depreciation is an allowance that allows capital investors to recoup their investment over the life of an asset – just like principal being paid back on a home loan.

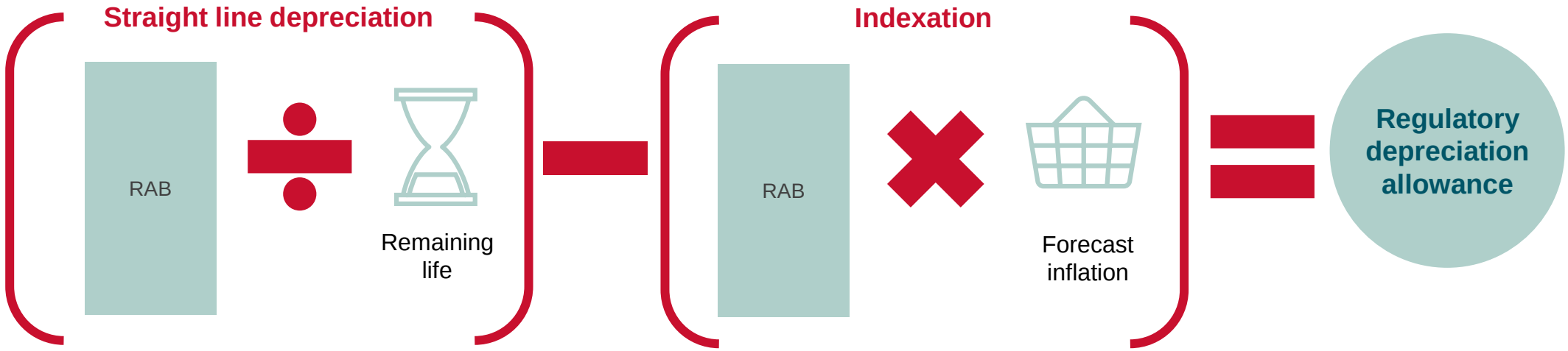
How is depreciation calculated?

The AER's Post Tax Revenue Model is used to calculate the depreciation allowance. The formula below is calculated for each financial year



Indicative depreciation for 2025-2030

The proposed remaining life of Directlink is 16.2 years at 1 July 2025 to reflect its technical remaining life



2025-30 indicative outcomes

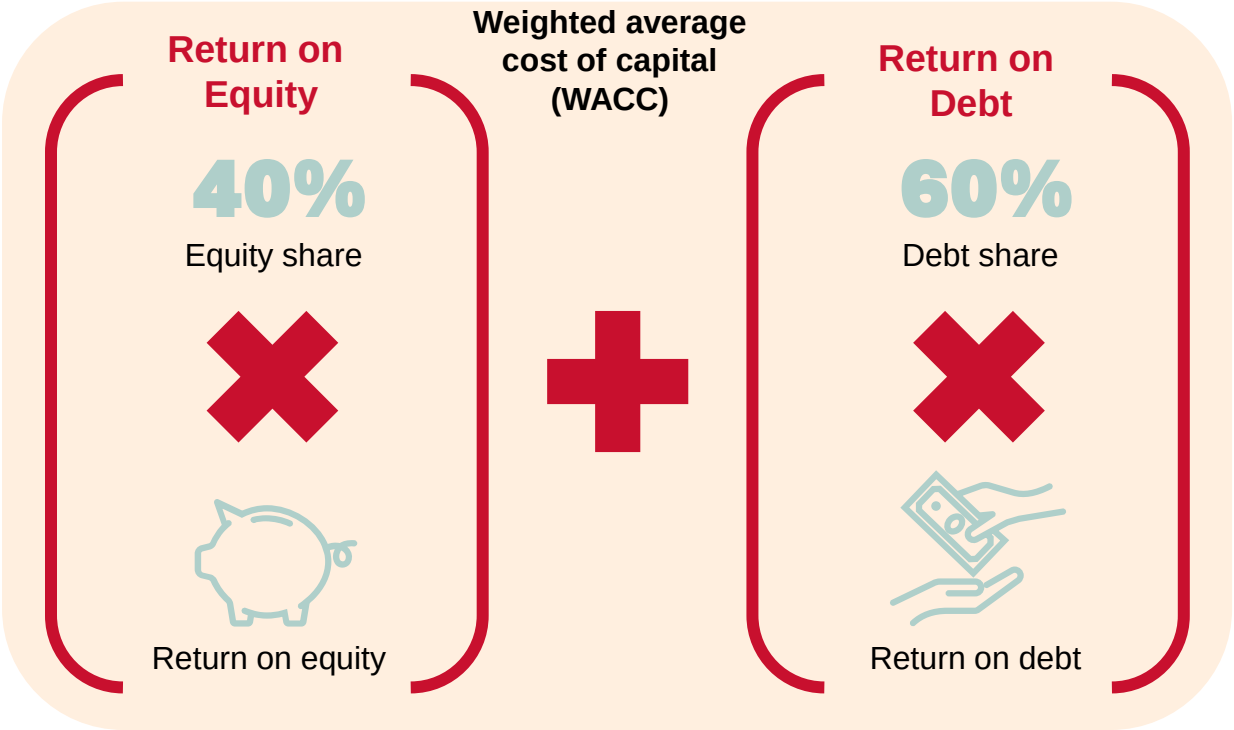
Return on capital

What is Return on Capital?

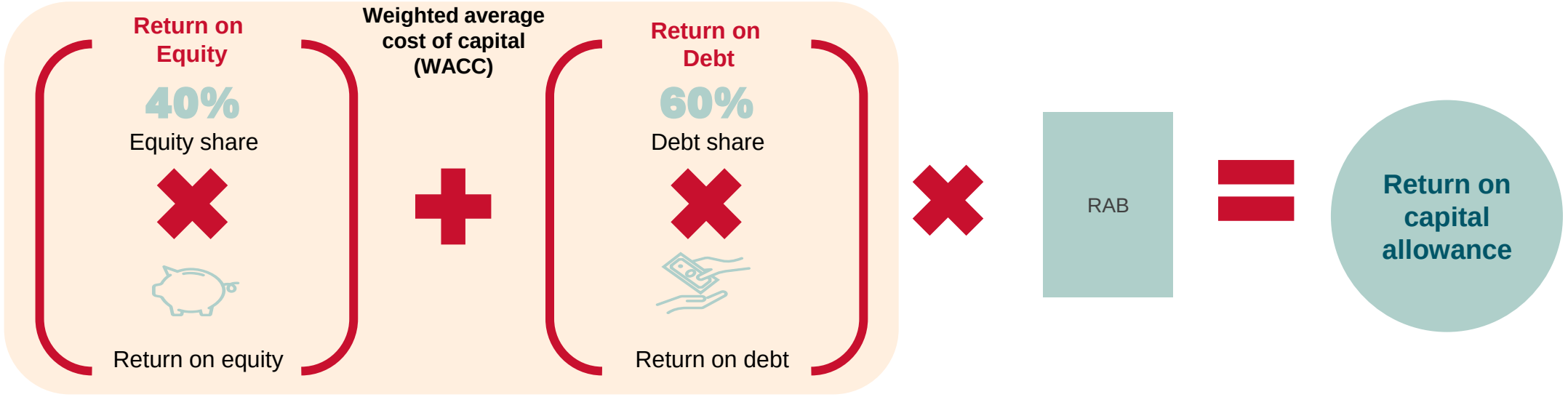
Return on capital is an allowance that allows businesses to receive a return on its Regulated Asset Base. The return on capital is usually a key driver of revenues.

How is Return on Capital calculated?

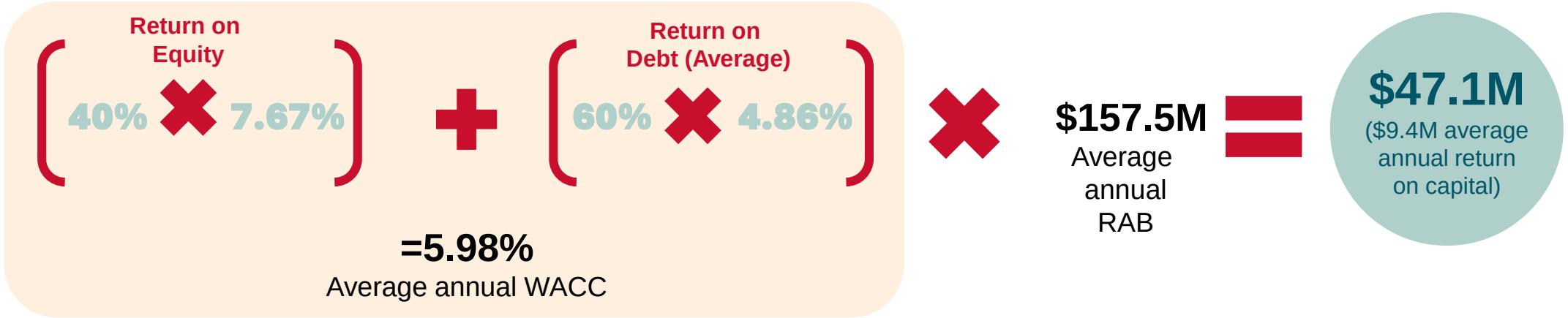
The AER's Post Tax Revenue Model and the Rate of Return Guideline is used to calculate the return on capital. The formula below is calculated for each financial year.



Indicative Return on capital for 2025-2030



2025-30 Indicative outcome

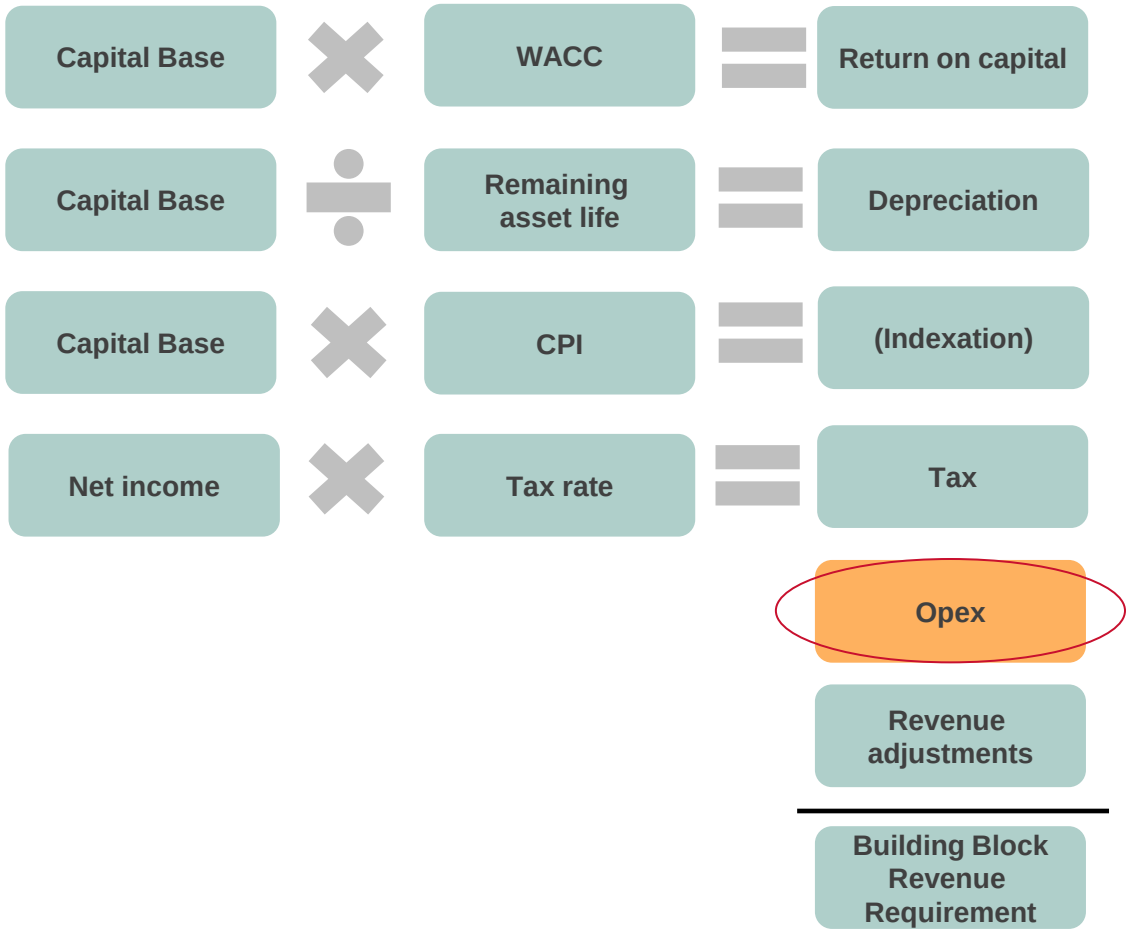


Operating expenditure for the 2025 to 2030 period

Objective: To seek stakeholder views on operating expenditure for the 2025 to 2030 regulatory period

Understanding the regulatory building blocks

Building block



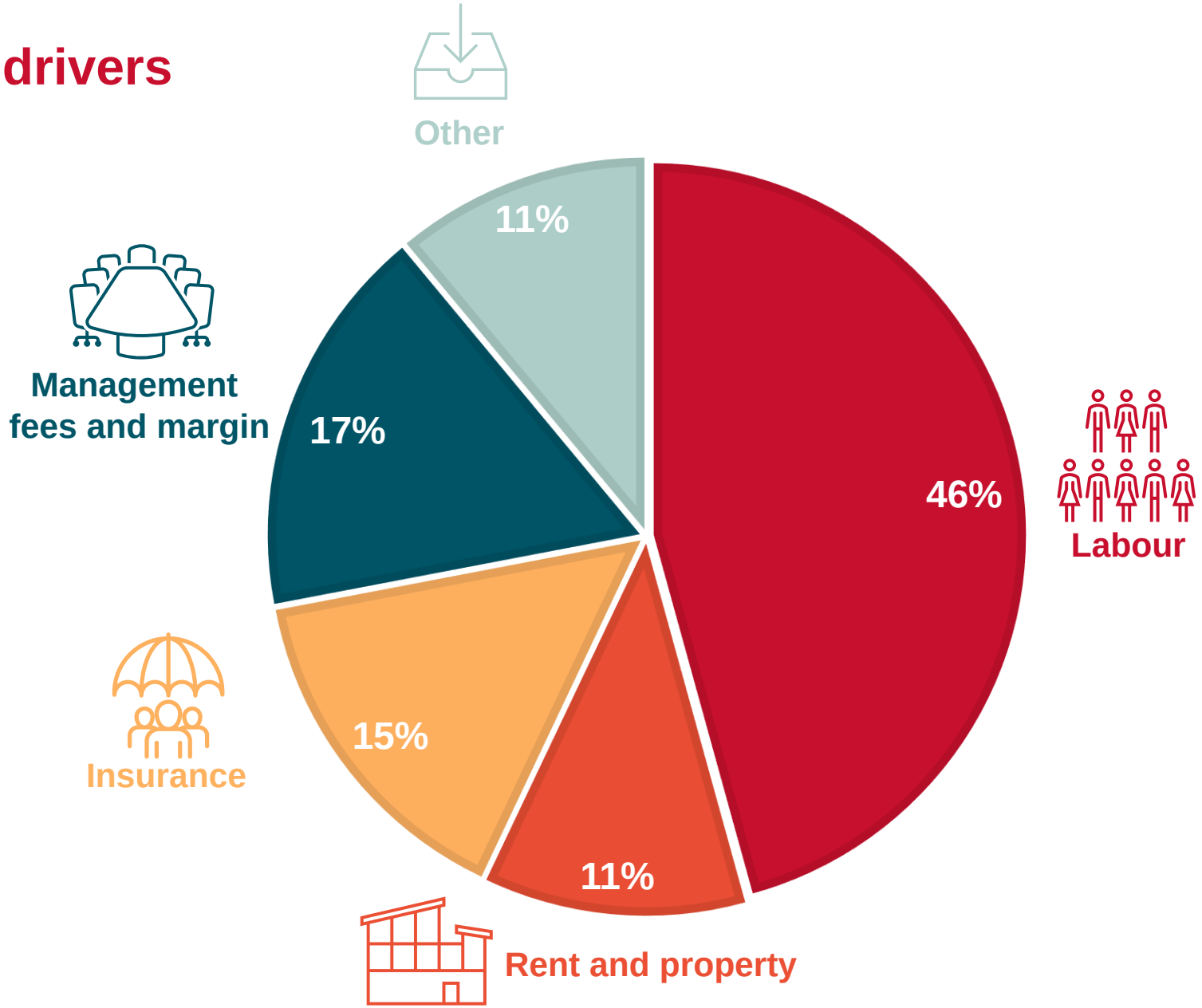
How operating expenditure affects revenue?

- Operating expenditure is money used to run the asset on a day-to-day basis
  - It is paid for by customers in the year it is spent
  - It doesn't include long term investments

- Operating expenditure is added directly to the building blocks, so $1 of operating expenditure translates to $1 of revenue

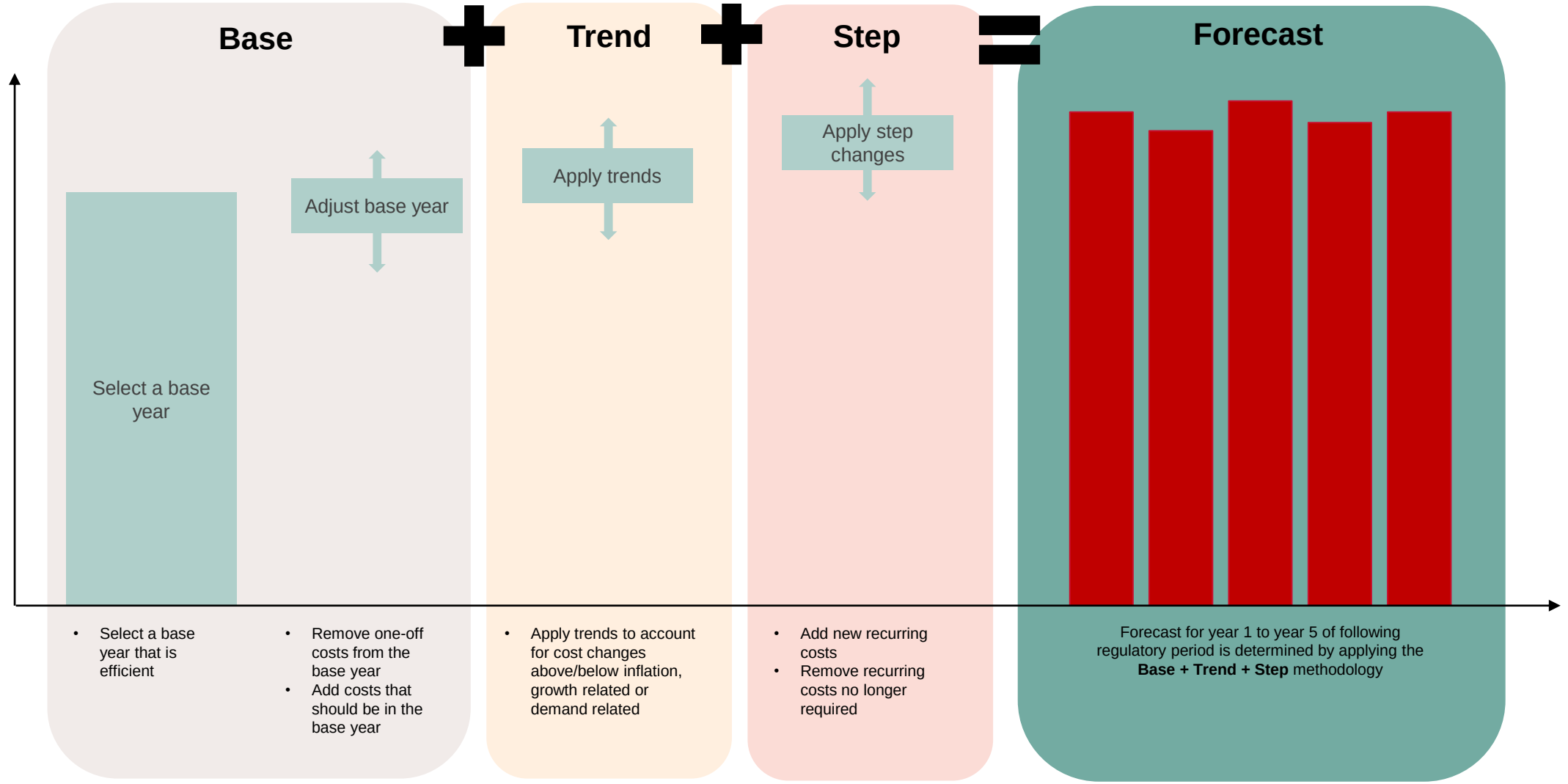
Operating expenditure drivers

In 2022-23 just under half of Directlink's operating expenditure was labour (including operating and maintenance contractors)

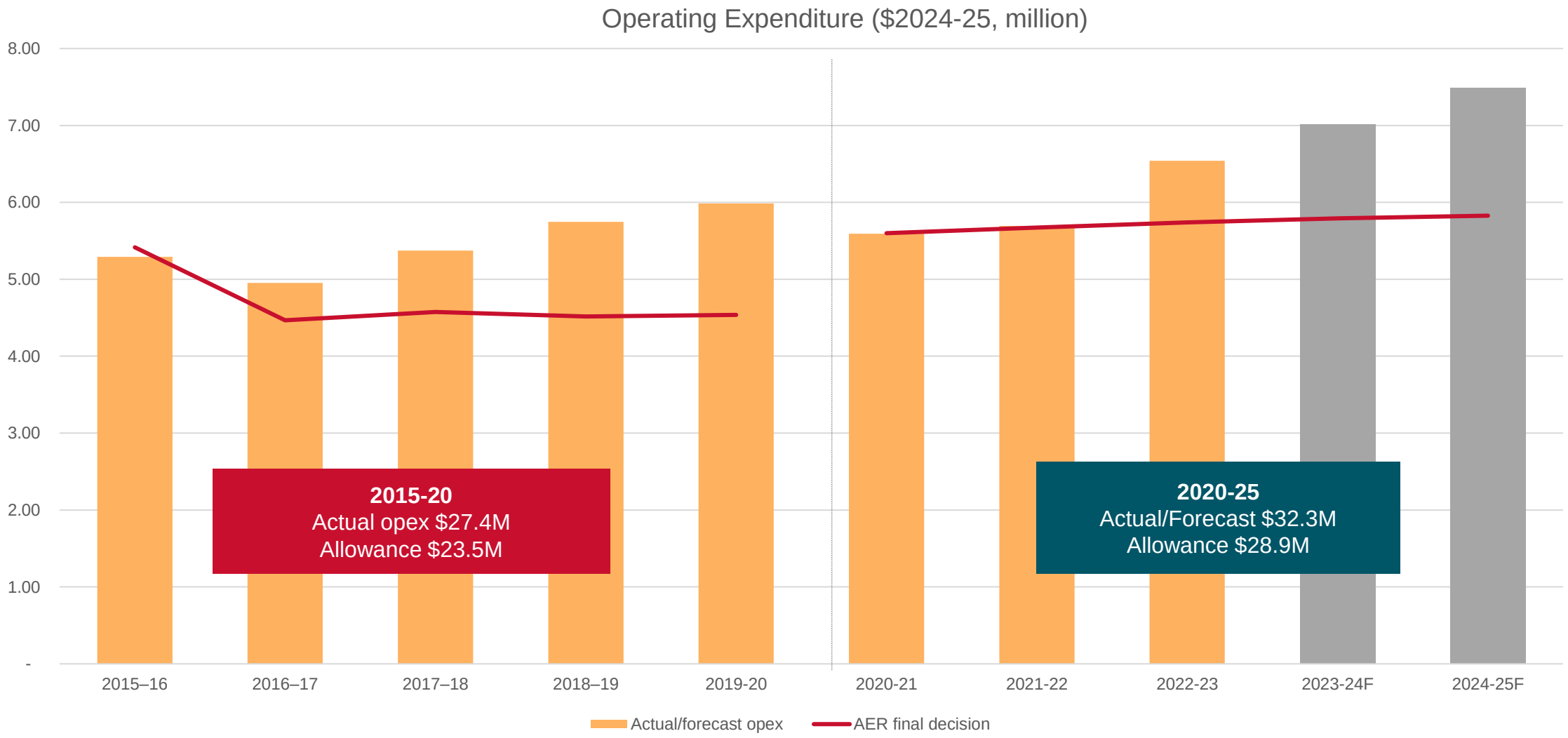


2022-23 operating expendtire

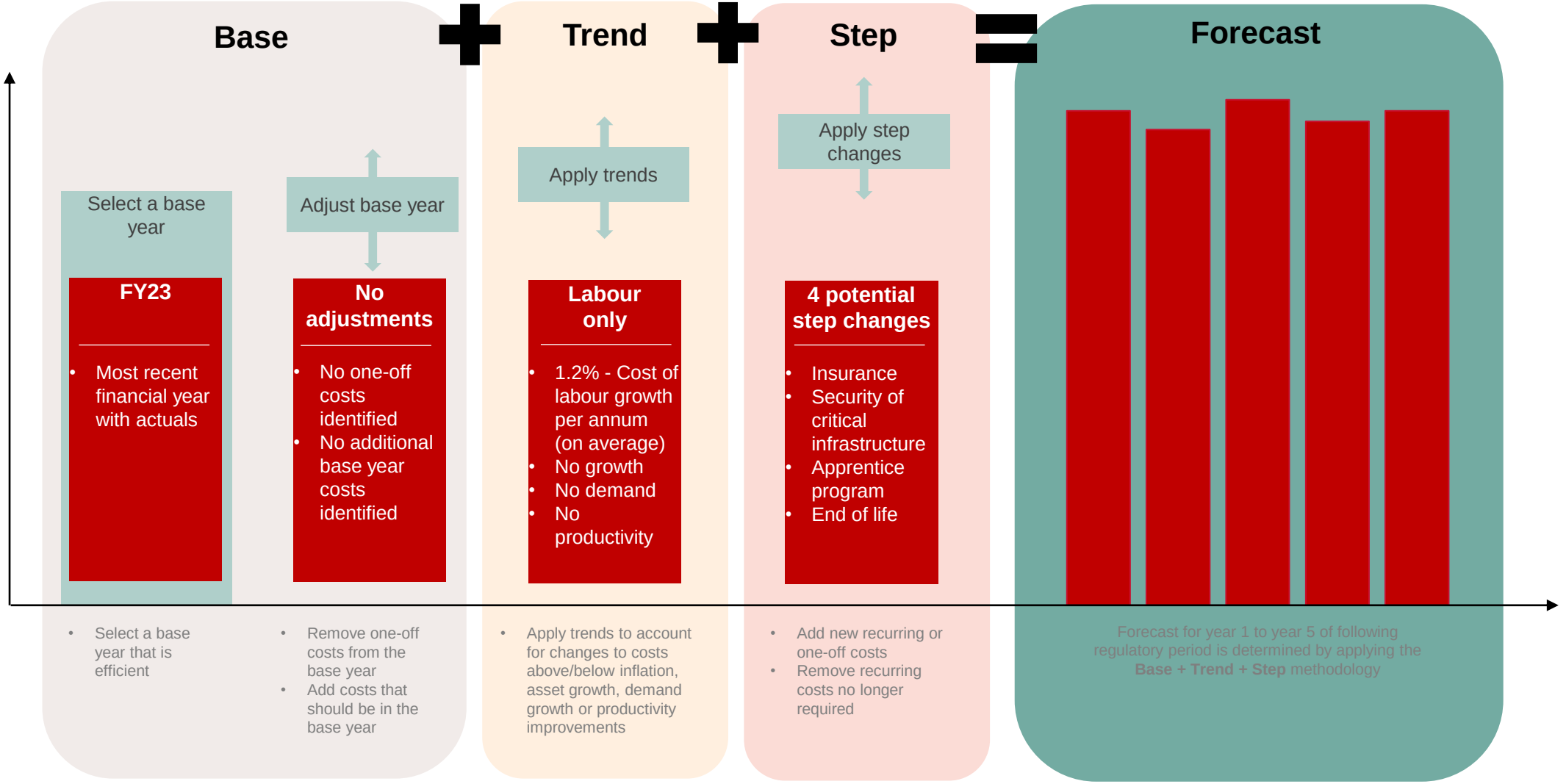
Base Trend Step methodology – how does it work?



Directlink's previous operating expenditure



Base Trend Step application to Directlink



Potential step changes (1)

Insurance

Insurance for Directlink is forecast to increase progressively over the 2025-30 regulatory period.

These increases are being driven by tightening market conditions and responses to the increasing frequency and severity of extreme weather events.

Insurance costs are currently $865k (FY23).

Additional insurance costs compared to FY23 base year (indicative)

FY26	FY27	FY28	FY29	FY30
$150k	$188k	$210k	$223k	$207k

Security of Critical Infrastructure (SoCI)

The provisions of the Commonwealth Security of Critical Infrastructure (SoCI) Act will apply to APA and its subsidiary businesses, along with other energy networks. SOCI compliance costs, over and above business as usual costs, include:

- Cyber security
- Technology line security governance
- Program management and material risk
- Enterprise security governance
- Personnel security
- Supply chain security

Additional SOCI costs compared to FY23 base year (indicative)

FY26	FY27	FY28	FY29	FY30
$382k	$543k	$234k	$234k	$234k

All figures presented in 2024-25$

Potential step changes (2)

End of life program

Directlink will reach the end of its economic life and be fully depreciated in 2041/42. It will also reach the end of its technical life, with key technology likely to be obsolete or sub-optimal by approximately 2042.

An annual amount is proposed to be set aside to cover the cost of restoration and rectification works at the end of the life of Directlink.

The amount to be set aside each year will be less than the amount that will be required to be charged to customers in 2041/42.

New end of life costs compared to FY23 base year (indicative)

FY26	FY27	FY28	FY29	FY30
$750k	$750k	$750k	$750k	$750k

Labour resilience

The energy transition will create competition for limited resources which may lead to labour and skills shortages into the future.

To help protect against the risk of labour and skills shortages, we are exploring whether:

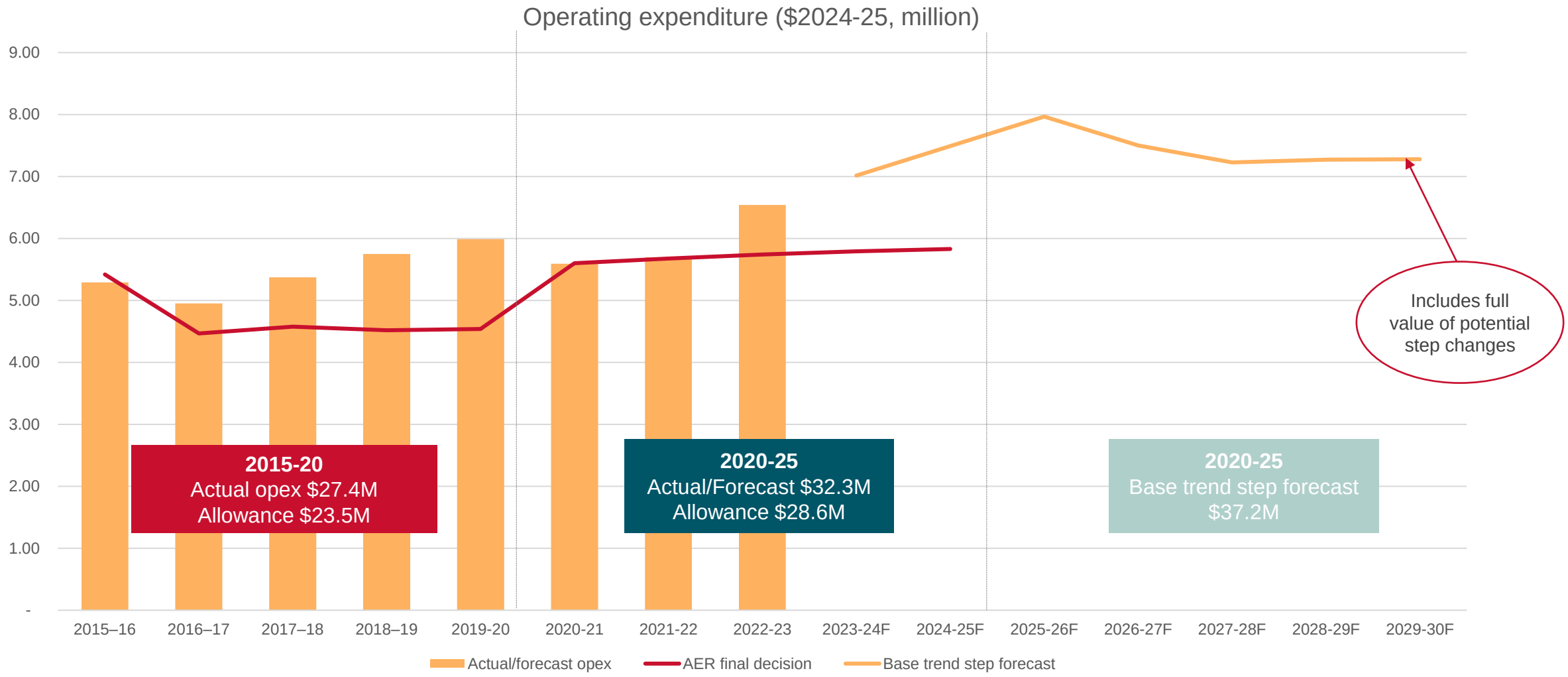
- APA's apprenticeship program should be extended to Directlink,
- additional skilled labour should be employed, or
- other workforce strategies should be deployed.

Additional labour resilience costs compared to FY23 base year (indicative)

FY26	FY27	FY28	FY29	FY30
$300k	$300k	$300k	$300k	$300k

All figures presented in 2024-25$

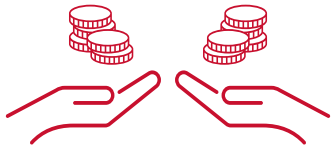
Directlink's Operating expenditure – draft forecast



Capital Expenditure Sharing Scheme

Objective: To seek stakeholder views on the capital expenditure sharing scheme for the 2025 to 2030 regulatory period

What is the Capital Expenditure Sharing Scheme (CESS)?



The CESS provides financial rewards for network service providers whose capital expenditure becomes more efficient and financial penalties for those that become less efficient.

Consumers benefit from improved efficiency through lower regulated prices.

A network business:
- Retains 30 cents of an under spend
- Is penalised 30 cents for an over spend

For every dollar of **efficient** actual capital expenditure above or below the AER's allowed capital expenditure

A customer:
- Retains 70 cents of an under spend
- Pays 70 cents for an over spend

A network business:
- will be penalised by the full $1
- capital expenditure may not be allowed to be added to the RAB

If the AER determines an over spend is **inefficient**

- A customer does not pay

IGBT replacement - implications for CESS

Issue

- Directlink forecast a long term IGBT replacement contract with Hitachi as part of it forecast capital expenditure for the 2020-25 period
- The possibility of a contract was discussed with Hitachi prior to submission of the 202-25 regulatory proposal
- The forecast for a contract to the end of Directlink's regulatory life was $3.3M per annum for 10 years and then $1.7M per annum until 2024
- When it came to negotiating the actual project, Hitachi refused to negotiate on that basis and insisted on an asset replacement contract
- This has resulted in IGBT capex being much higher than forecast, leading to additional CESS penalty

	Option 1 **Separately assess the IGBT replacement project**	**Option 2** **Continue the CESS across multiple revenue periods**
What is the principle that holds true?	*"The revised project is prudent because of Hitachi's actions"*	*"The original proposal was prudent and should be reflected across multiple periods"*
What method is used to assess CESS penalty reward arising from 2020-25?	• Remove IGBT costs from both actual and allowance • Assess the prudency and efficiency of the IGBT replacement project underway	• Assess actual capex against allowance without change
How will it be treated in 2025-30 and beyond?	• Base the allowance on the forecast spend and assess the future actual spend against this allowance	• Base the allowance on the forecast spend, including the forecast IGBT contract cost, and assess the future actual spend against this allowance
CESS outcomes for IGBTs	No penalty or reward	Penalty for 2020-25 Rewards from 2025-30 to 2042

Other topics - Cost pass through and pricing methodology

Objective: To seek stakeholder views on nominating cost pass troughs and the pricing methodology for the 2025 to 2030 regulatory period

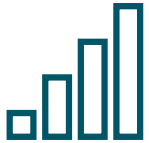
What is a cost pass through?

During a regulatory period, circumstances can change that might affect the amount of revenue a network service provider requires to operate.

The Rules provides a mechanism to ensure substantial cost increases or reductions resulting from material unforeseen events can be reflected in the revenue requirement.

Prescribed events

Regulatory change event



Service standard event

Tax change event

Insurance event

Intertia shortfall event

Any another event specified in a determination, referred to as nominated events

What are we proposing?

Any another event specified in a determination, referred to as nominated events

Nominated events approved for 2020-25

Insurer's credit risk event

Terrorism event

Additional events to be nominated for 2025-30

Insurance coverage event

Natural disaster event

Pricing methodology

Directlink does not establish tariffs for the provision of its service

The annual revenue requirement set in accordance with the AER's determination is billed to Transgrid in 12 monthly instalments

Transgrid

Transgrid is the appointed coordinating Network Service Provider for the NSW and ACT.

As the coordinator, TransGrid applies **its pricing methodology** to determine the transmission prices to be charged in the NSW region to recover the regulated transmission revenues of Ausgrid, ActewAGL, Directlink and itself in line with the National Electricity Rules

No changes to the pricing methodology are proposed for the 2025-30 period

Directlink revenue represents

~0.05%

of NSW customers' total electricity bills.

2023-24 maximum allowed revenue for Transgrid is $924M
2023-24 Maximum allowed revenue for Directlink is $16M (1.7%)

Wrap up and next steps

Objective: To thank participants and explain next steps.

Next steps

- **Stakeholder group to:**
  - Complete evaluation survey for today's meeting
  - Advise on areas of interest for the next meeting, which will provide a full overview of the Directlink revenue proposal, on **Monday 4 December, 1:30pm – 3:00pm**
- **APA to:**
  - Confirm agenda for the next meeting
  - Send out meeting papers for the next meeting in late November

Questions

always
powering
ahead

Thank you