From megaprojects to maintenance

Australian Local Government Association
November 2022
Marion Terrill, Transport and Cities Program Director

From megaprojects to maintenance

We're building megaprojects like there's no tomorrow

- All the growth is in megaprojects
  - Cost overruns are a problem
  - Bigger projects are riskier
  - Prematurely announced projects are riskier

Does more spending on megaprojects mean less spending on maintenance?

- Spending on roads across all levels of government is on the rise
  - But the spending isn't growing equally across all levels of government
- Rising road spending does not appear to mean rising maintenance spending
  - Because the Commonwealth is spending more in relative as well as absolute terms
  - And because the quality of transport spending is often poor

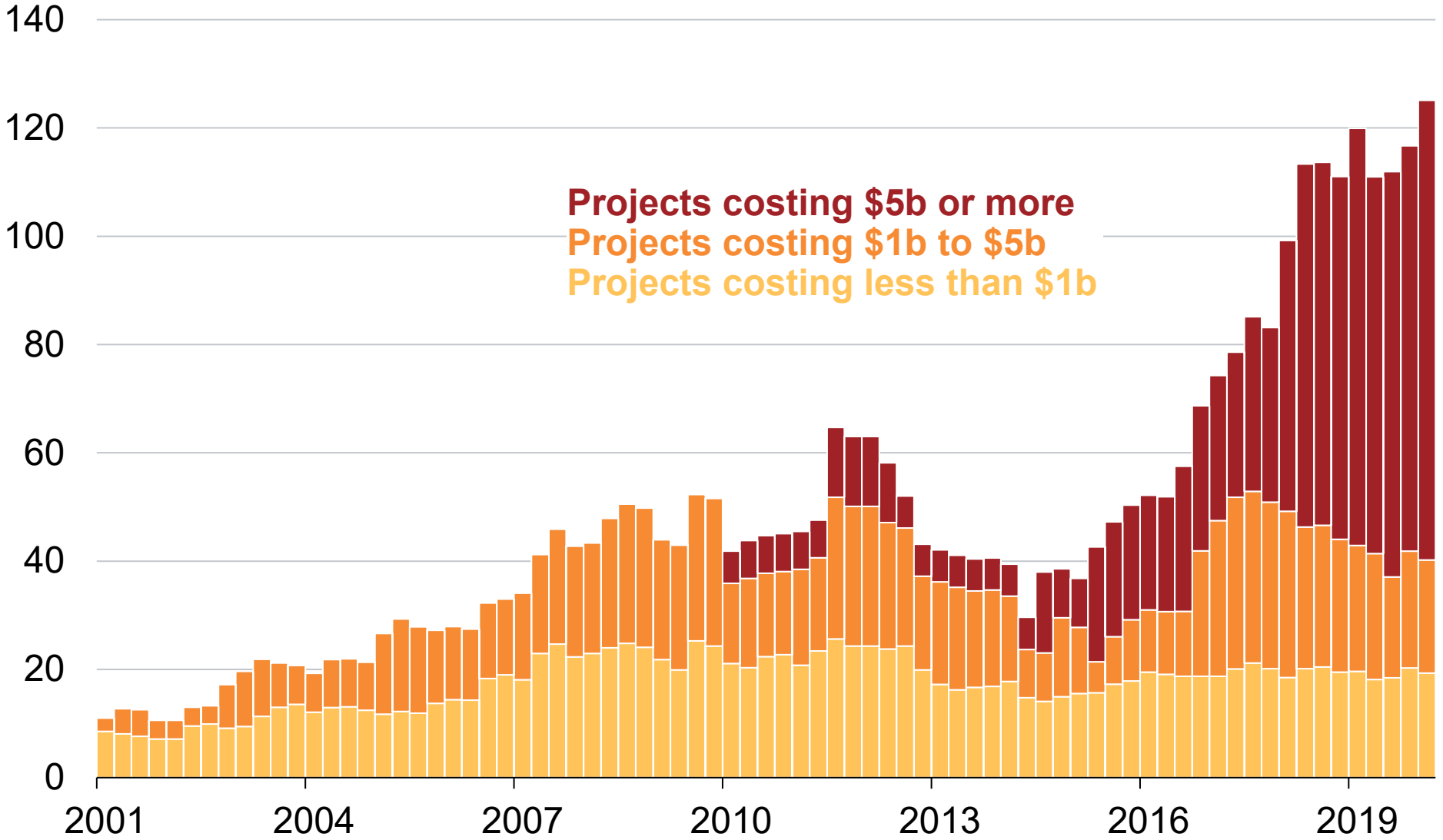
Looming challenges

- Frequency and severity of natural disasters
- Mountain of debt

What can be done?

All the growth in public road and rail infrastructure work is in megaprojects

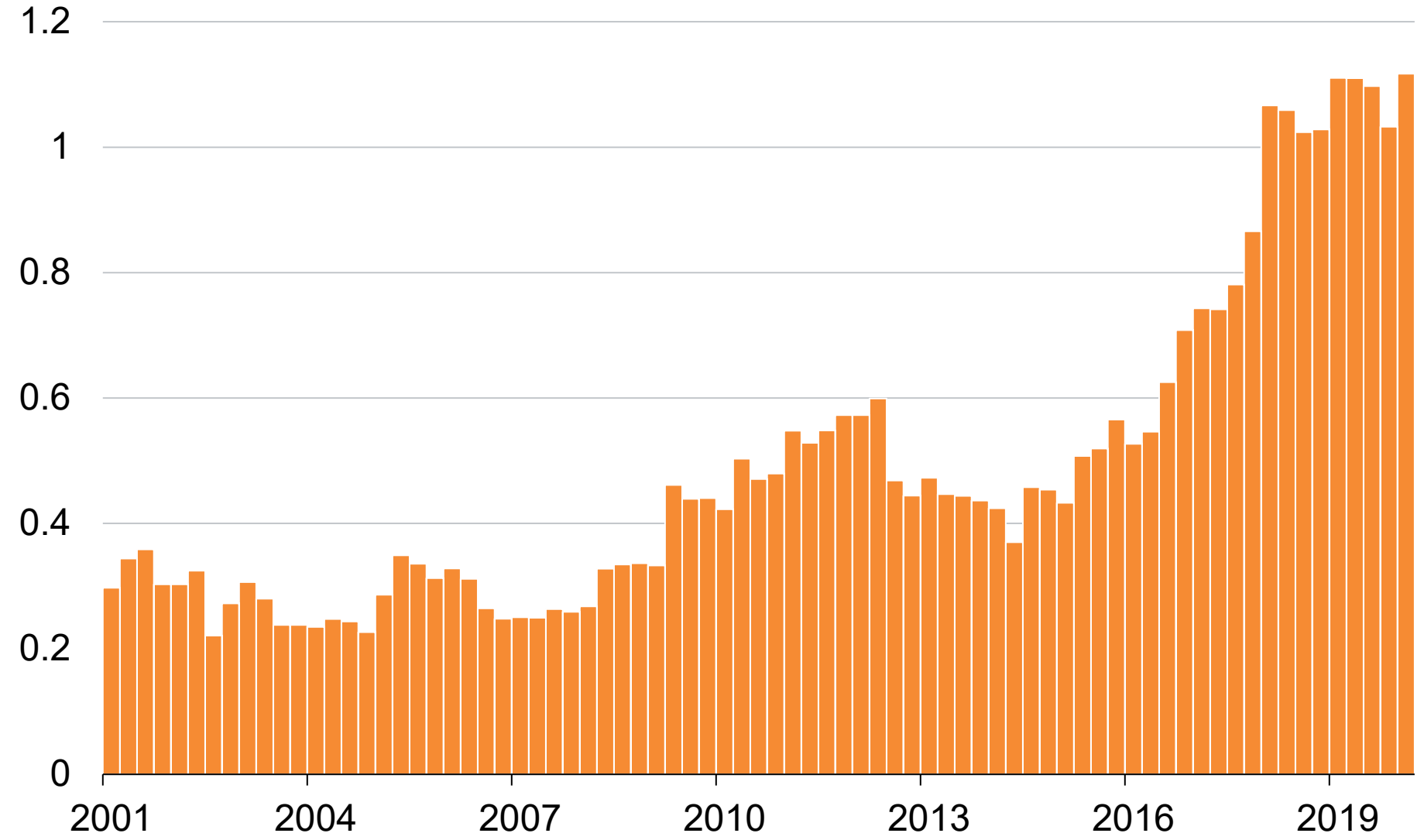
Expected cost of projects under construction, $2020 billion



Note: Includes all public road and rail projects costing more than $20 million.
Source: Grattan analysis of Deloitte Access Economics Investment Monitor.

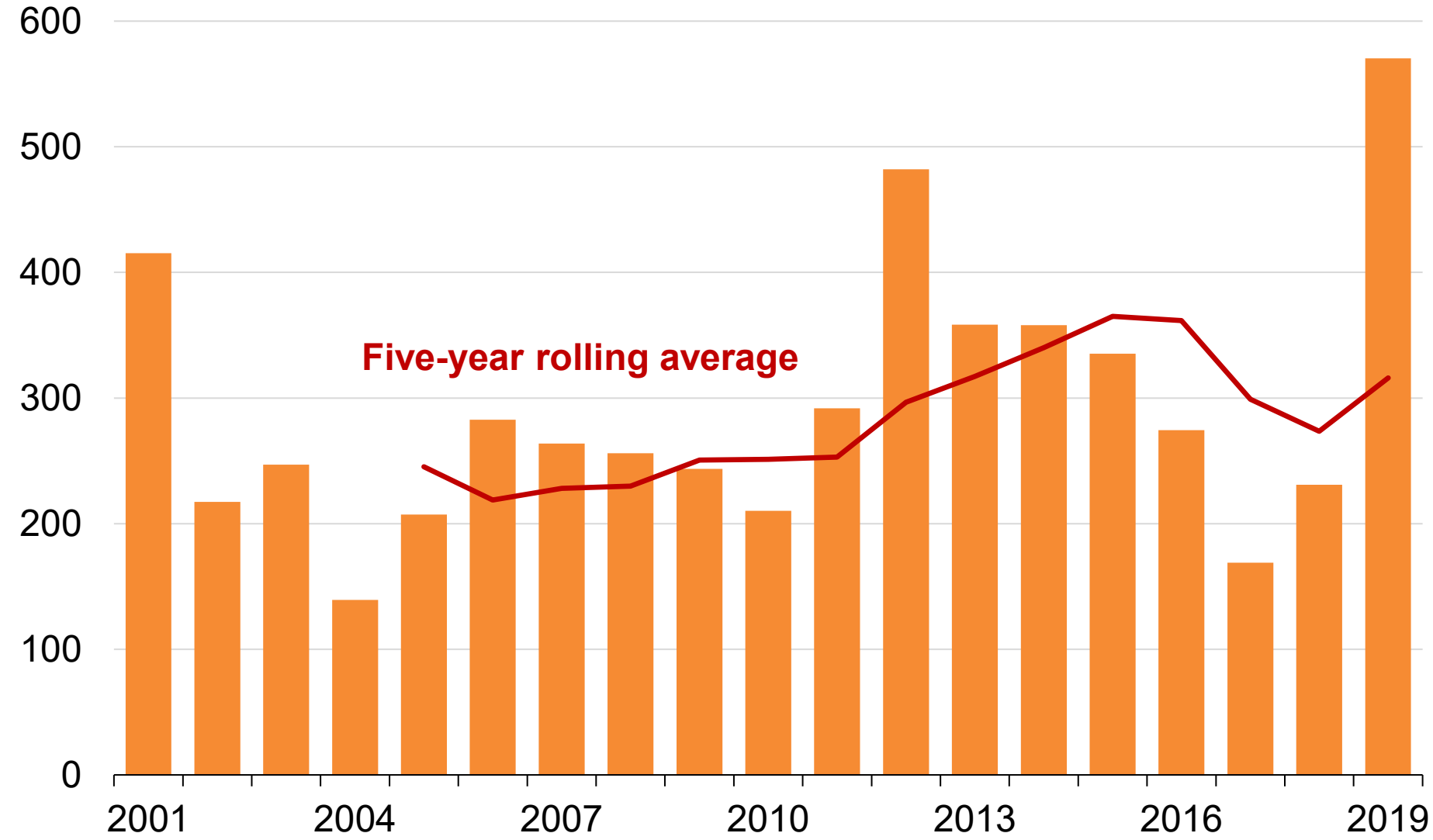
The average project under construction now is worth more than $1 billion

Average expected cost of projects under construction, $2020 billion



Note: Includes all public road and rail projects costing more than $20 million.
Source: Grattan analysis of Deloitte Access Economics Investment Monitor.

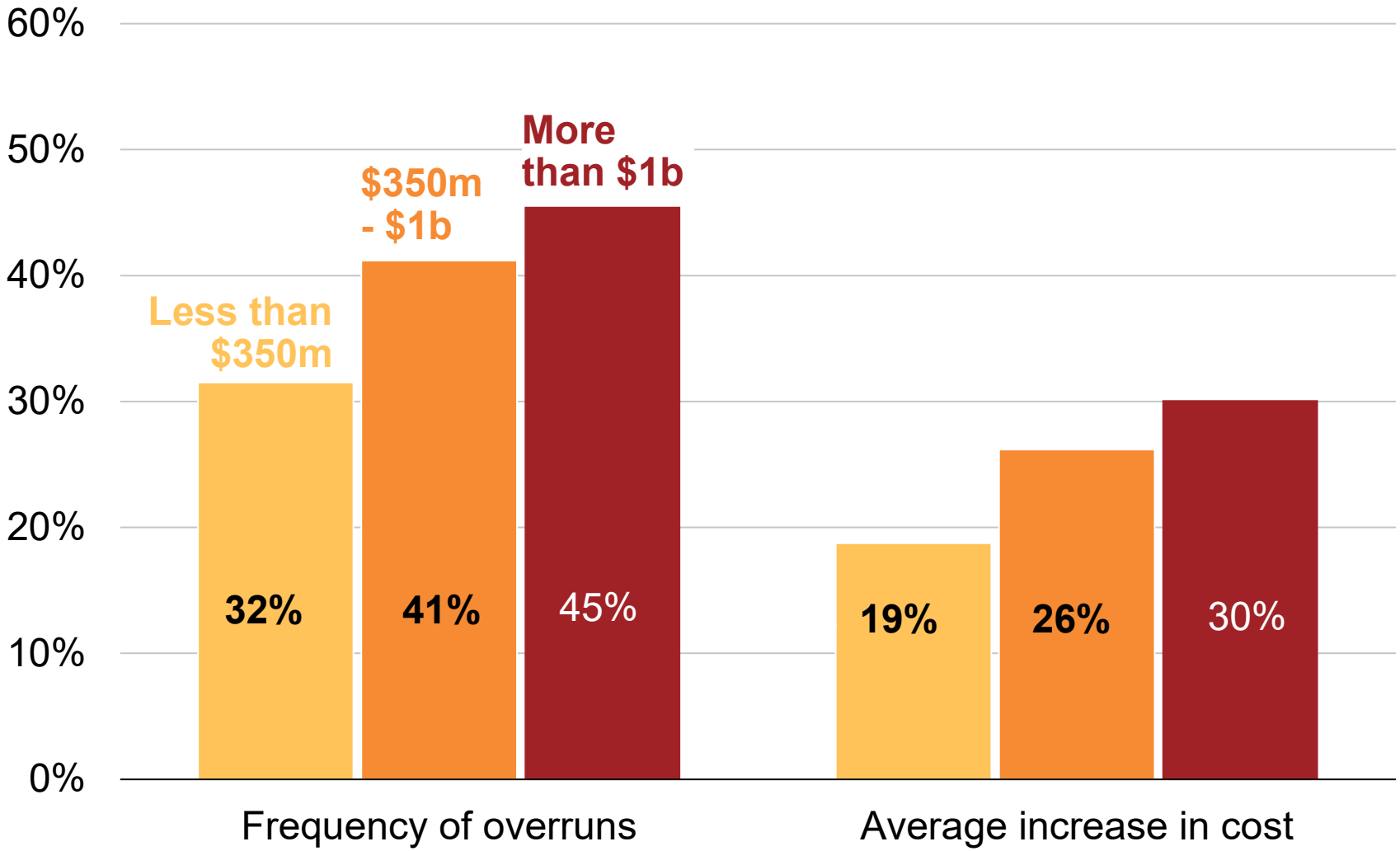
The average cost of completed projects leapt in 2019



Note: Includes all public road and rail projects costing more than $20 million.
Source: Grattan analysis of Deloitte Access Economics Investment Monitor.

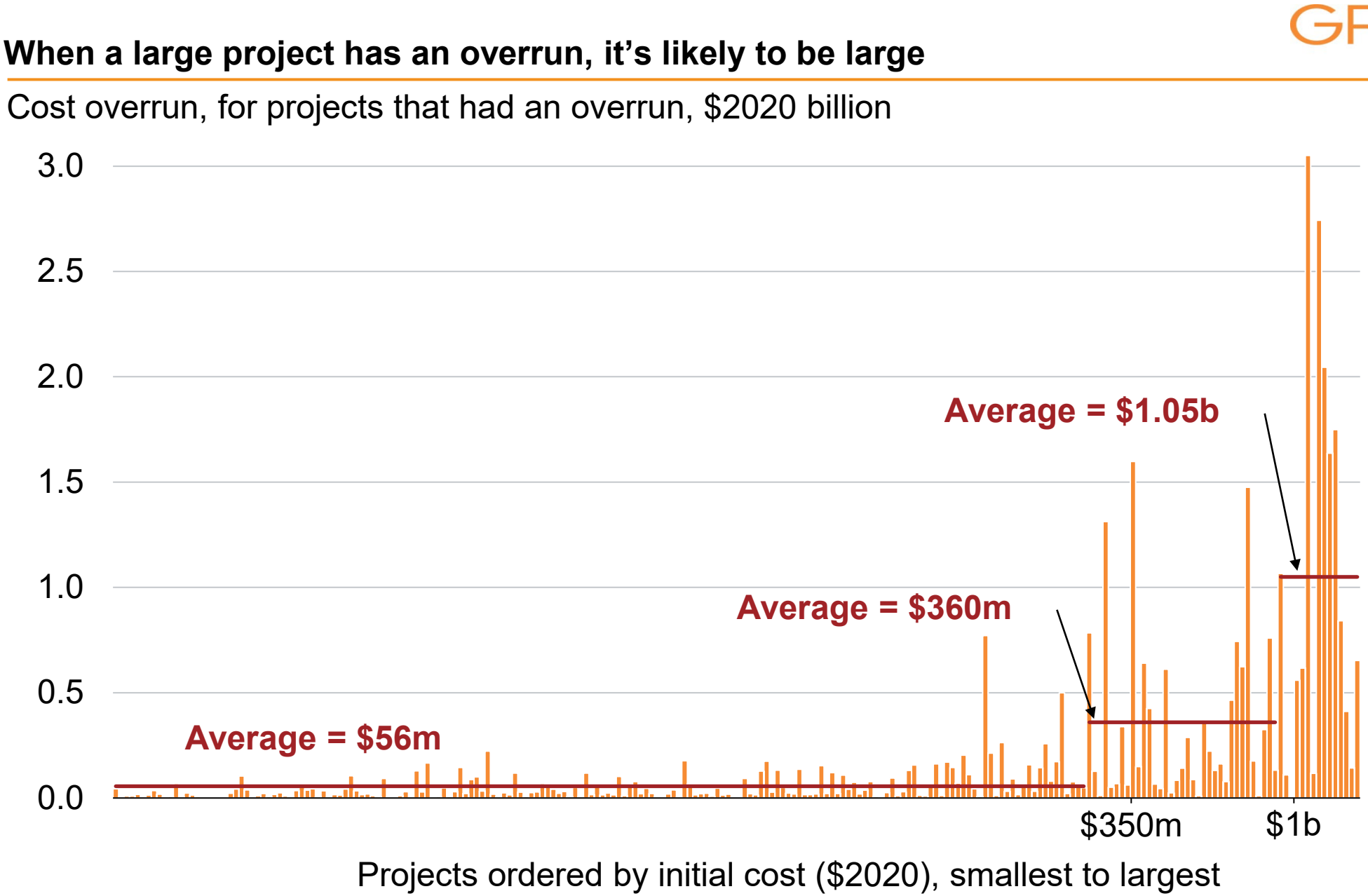
Megaproject problem #1: bigger projects overrun more often and by more

Frequency of overruns and average increase in cost as a percentage of initial project costs by level of initial cost



Note: Includes all public road and rail projects costing more than $20 million that were completed between Q1 2001 and Q1 2020.
Source: Grattan analysis of Deloitte Access Economics Investment Monitor.

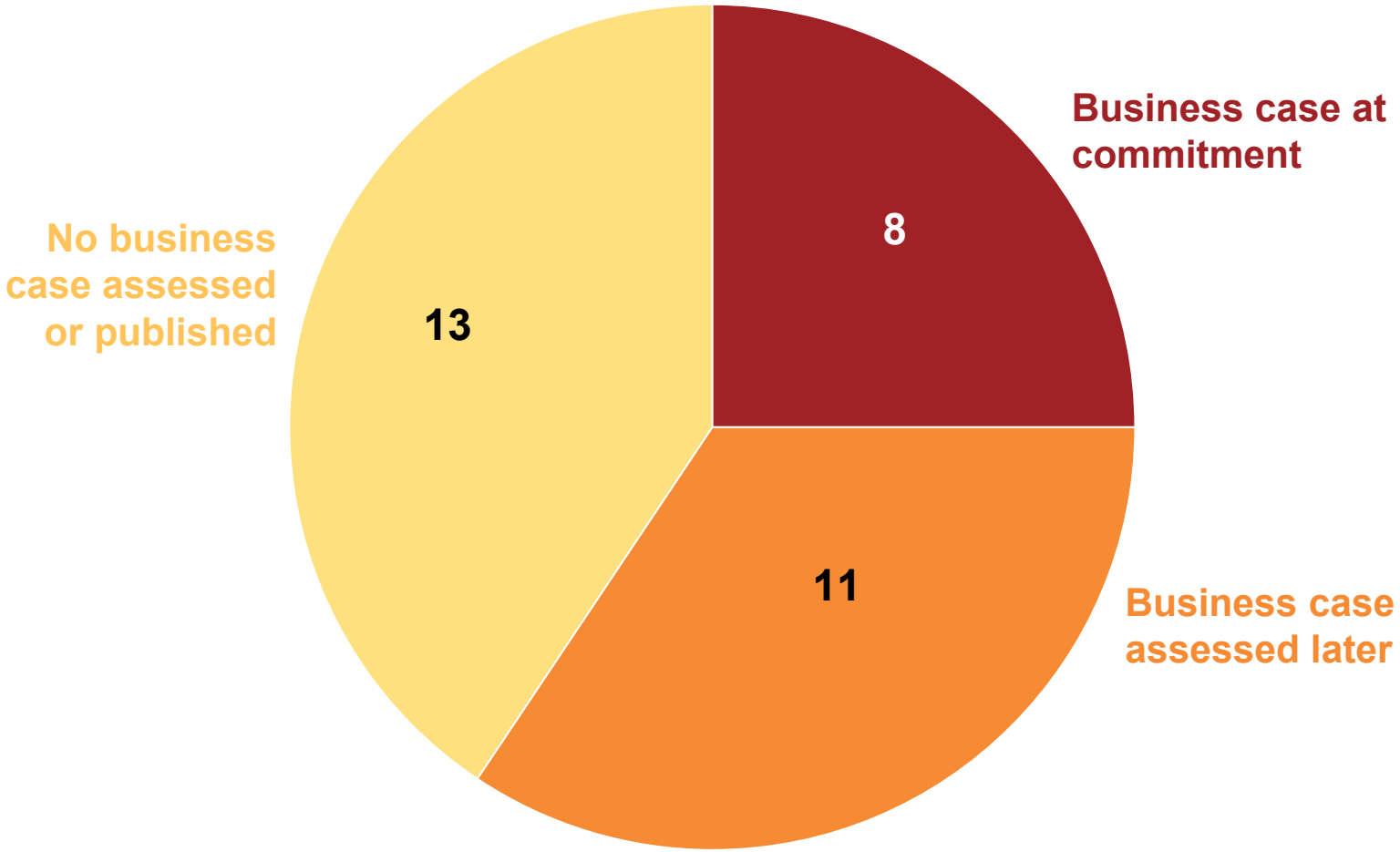
When a large project has an overrun, it's likely to be large



Note: Includes all public road and rail projects costing more than $20 million that were completed between Q1 2001 and Q1 2020 and that had an overrun.
Source: Grattan analysis of Deloitte Access Economics Investment Monitor.

Megaproject problem #2: most large projects are still committed to prematurely

Proportion of projects costing more than $500m, committed 2017-2020, with business case published or assessed by an infrastructure body

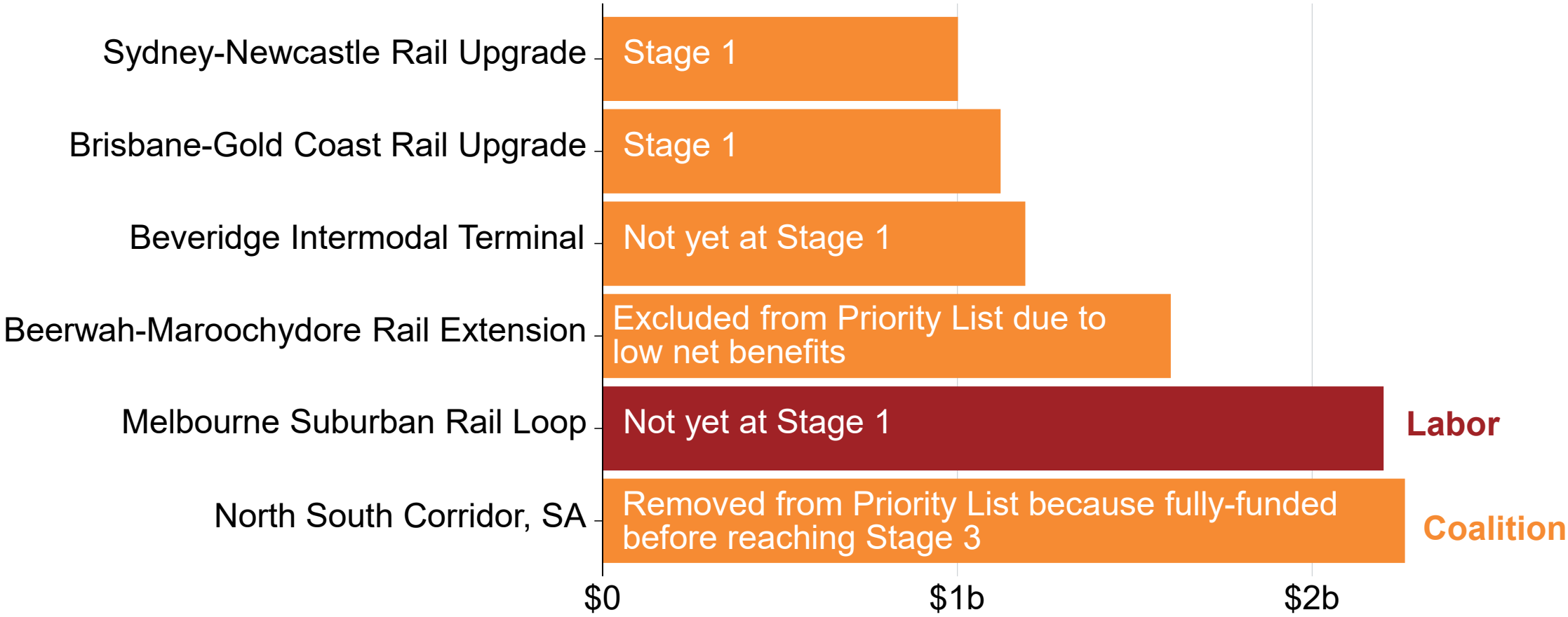


Notes: Includes all fixed infrastructure projects with expected total cost greater than $500 million, committed since December 2016. Does not include budget items referring to a program of smaller works. 'Committed' here refers to a budget allocation being made for construction of the project in a state or territory budget, or Commonwealth budget in the case of Inland Rail.
Source: Grattan analysis.

In the May federal election, none of the six billion-dollar projects had been assessed by Infrastructure Australia as nationally significant and worth building

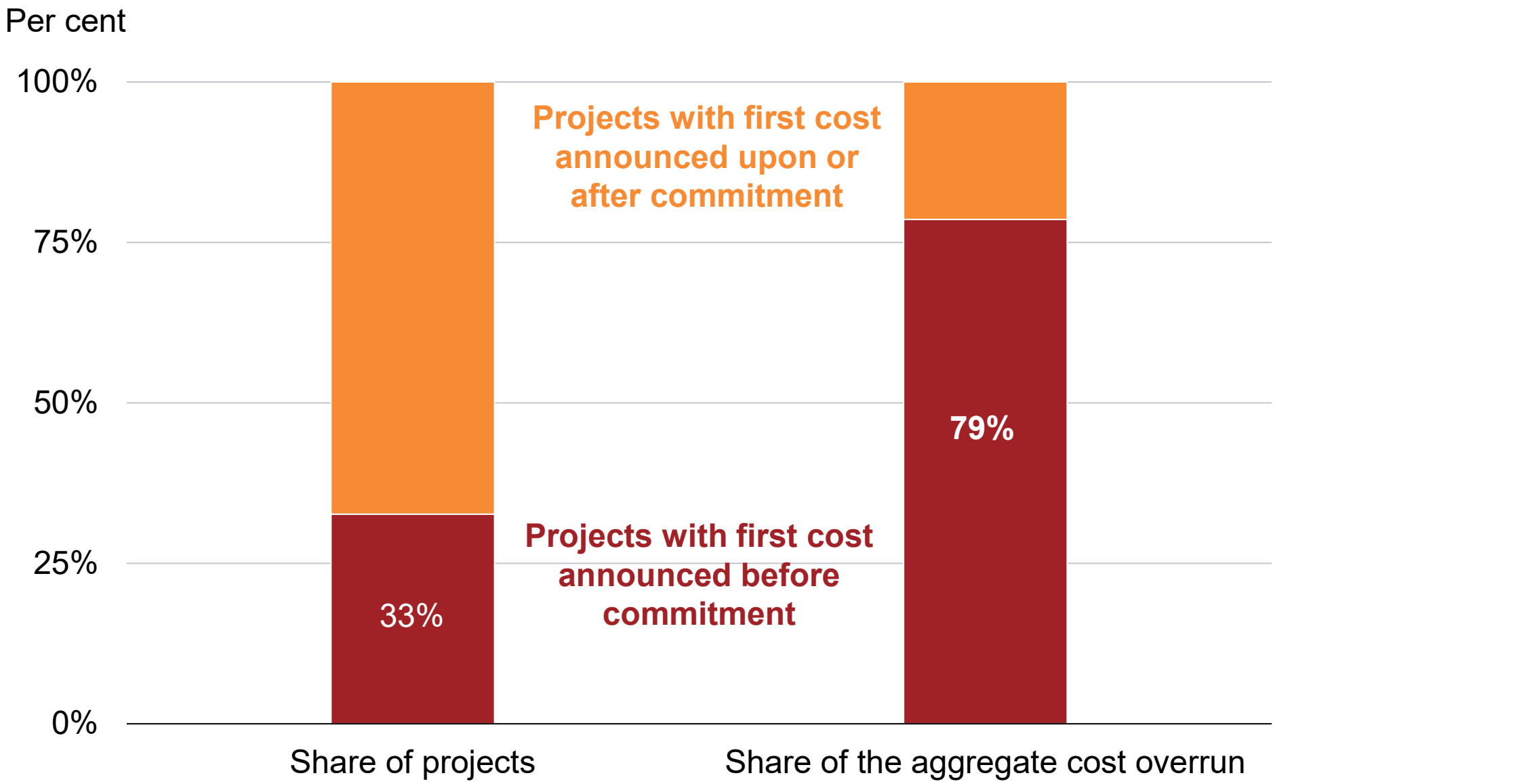
GRATTAN Institute

Project, value of promise and IA Priority List status



Source: Guardian Pork-O-Meter Data. Notes: Data downloaded 13 May, 2022. Includes promises from 1 January to 10 May, 2022. Infrastructure Australia's (IA) Priority List includes proposals that are expected to contribute to national productivity or to be socially beneficial. Stage 1 of the IA Priority List includes 'early stage' projects that address identified problems and infrastructure opportunities. At Stage 2, potential investment options have been identified and analysed. Stage 3 projects are investment-ready proposals. The North South corridor was assessed as a "project", a status now superseded with the introduction of the three-stage process.

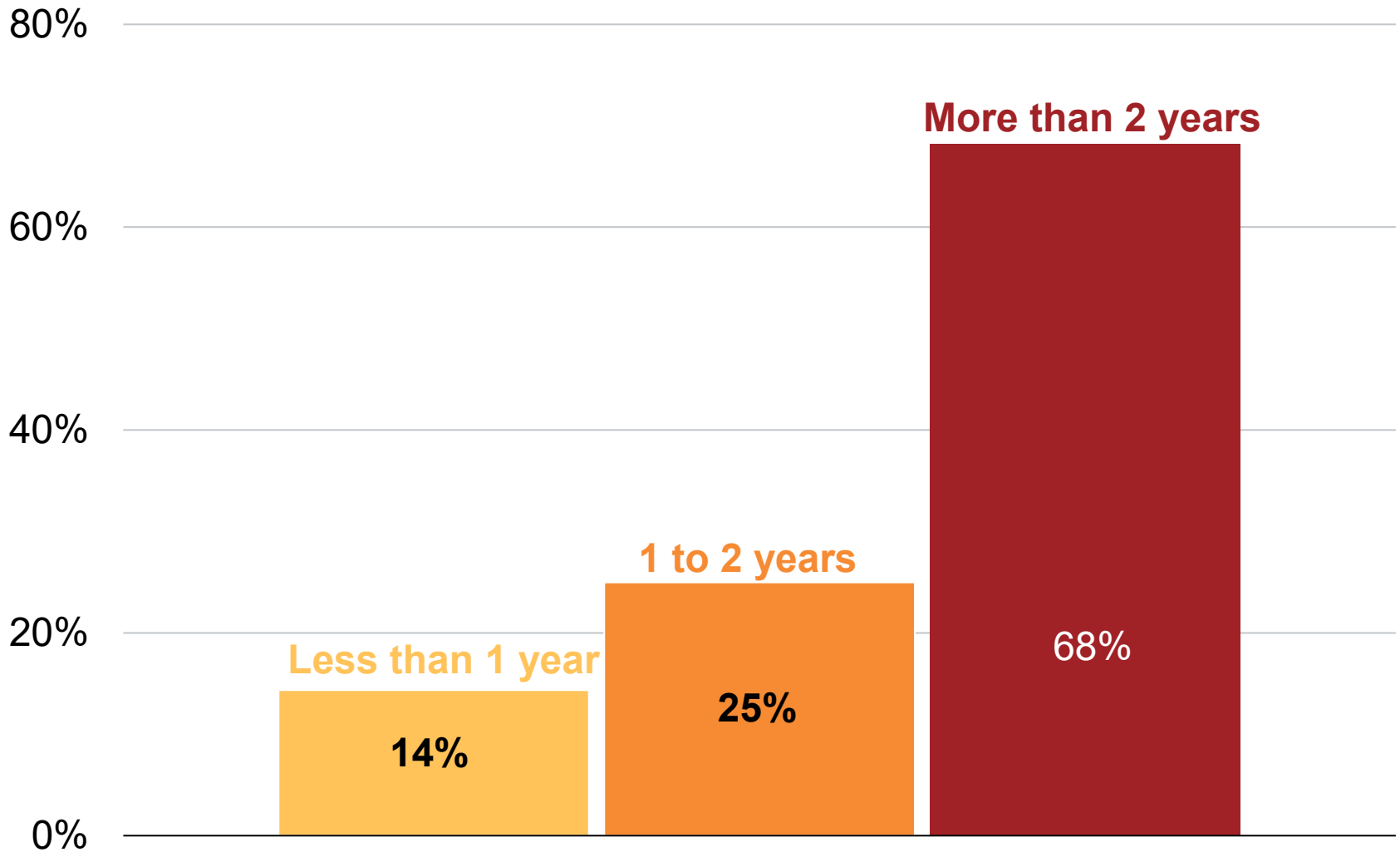
Prematurely announced projects account for most of the value of cost overruns



Note: Includes all public road and rail projects costing more than $20 million that were completed between Q1 2001 and Q1 2020.
Source: Grattan analysis of Deloitte Access Economics Investment Monitor.

The earlier the first cost announcement, the larger the overrun

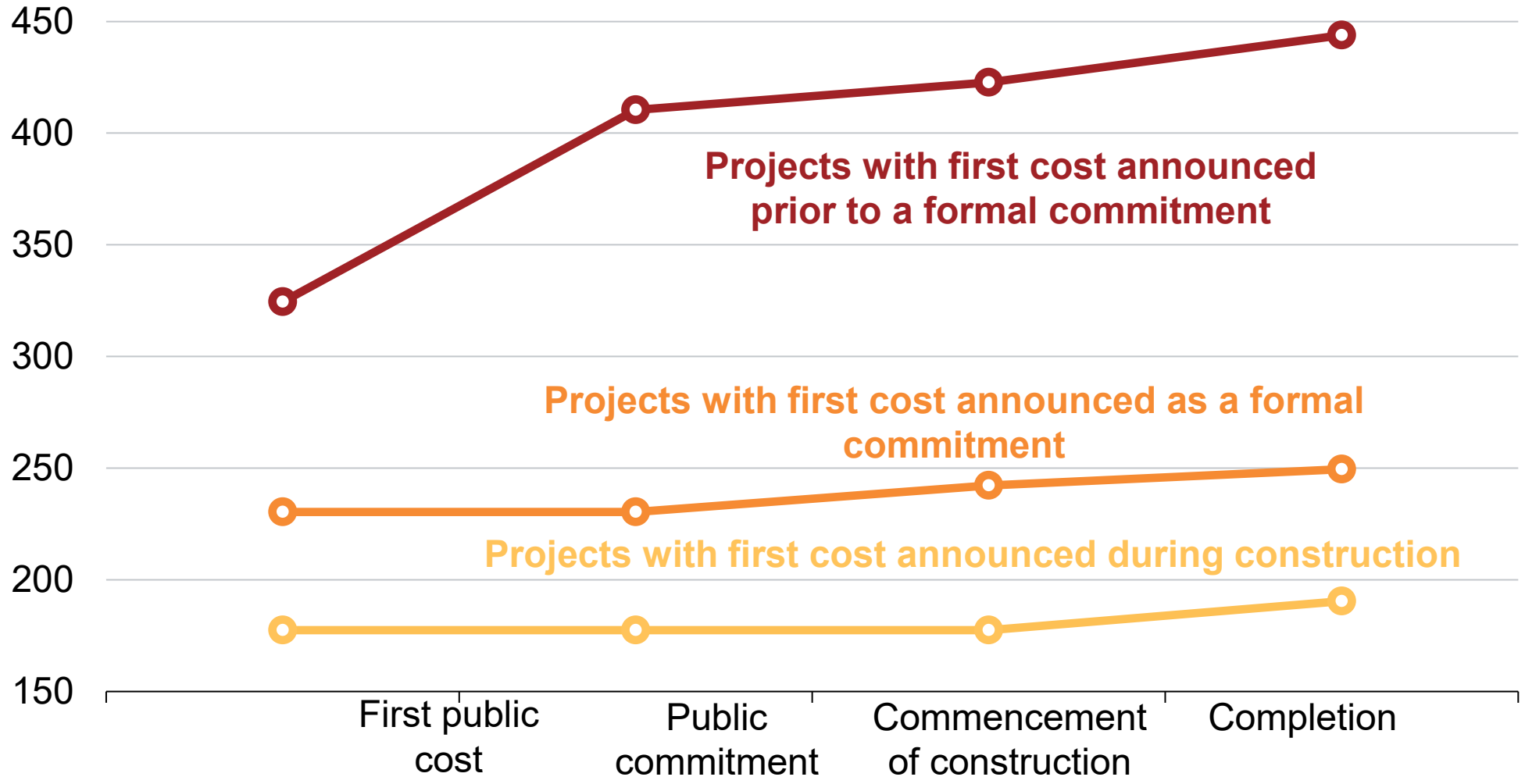
Average change in cost as a percentage of initial project costs, by length of time between first cost announcement and commencement of construction



Note: Includes all public road and rail projects costing more than $20 million that were completed between Q1 2001 and Q1 2020.
Source: Grattan analysis of Deloitte Access Economics Investment Monitor.

Projects with premature cost announcements are haunted throughout their lives

Average project size by project stage, $2020 million



Note: Includes all public road and rail projects costing more than $20 million that were completed between Q1 2001 and Q1 2020.
Source: Grattan analysis of Deloitte Access Economics Investment Monitor.

From megaprojects to maintenance

We're building megaprojects like there's no tomorrow

- All the growth is in megaprojects
  - Cost overruns are a problem
  - Bigger projects are riskier
  - Prematurely announced projects are riskier

Does more spending on megaprojects mean less spending on maintenance?

- Spending on roads across all levels of government is on the rise
  - But the spending isn't growing equally across all levels of government
- Rising road spending does not appear to mean rising maintenance spending
  - Because the Commonwealth is spending more in relative as well as absolute terms
  - And because the quality of transport spending is often poor

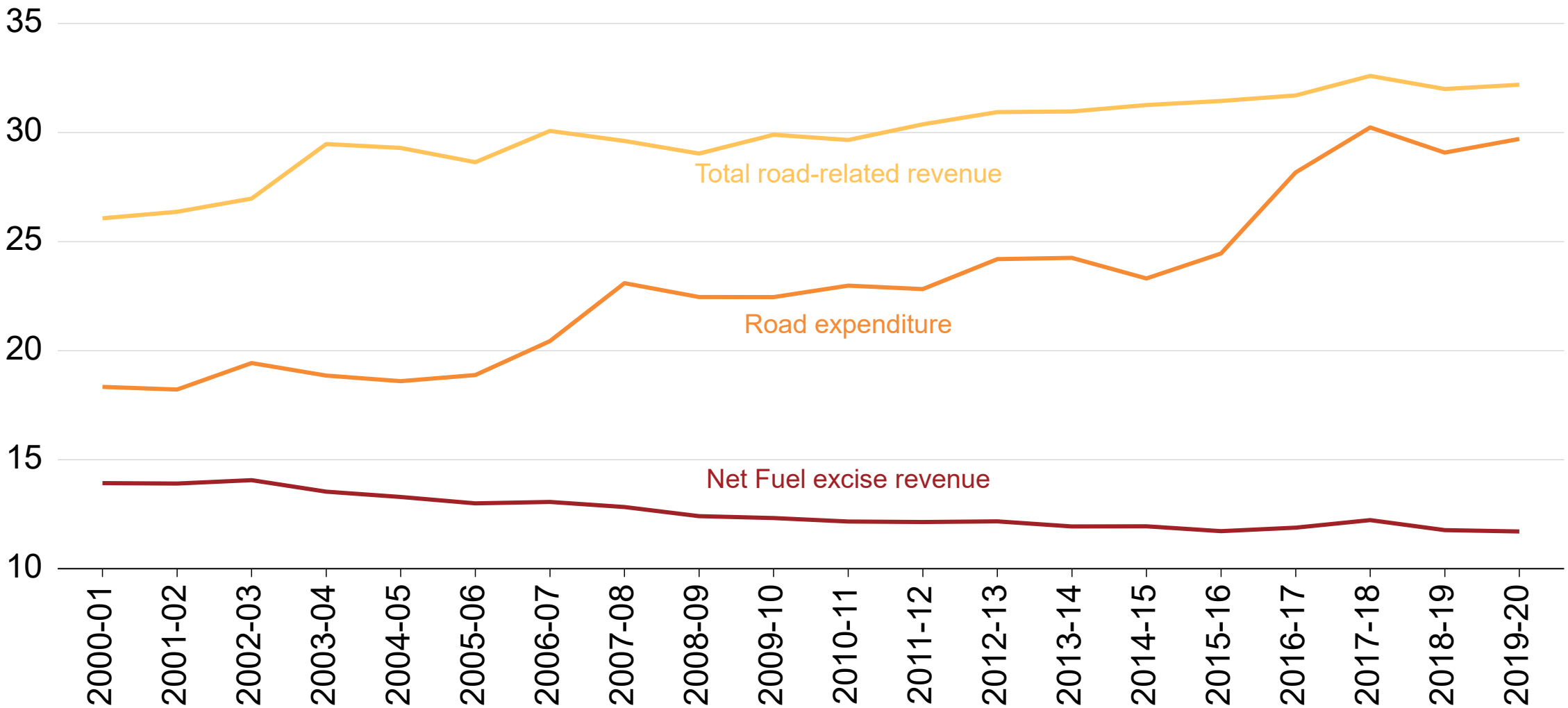
Looming challenges

- Frequency and severity of natural disasters
- Mountain of debt

What can be done?

Fuel excise revenue has not been tied to road-related expenditure since 1959

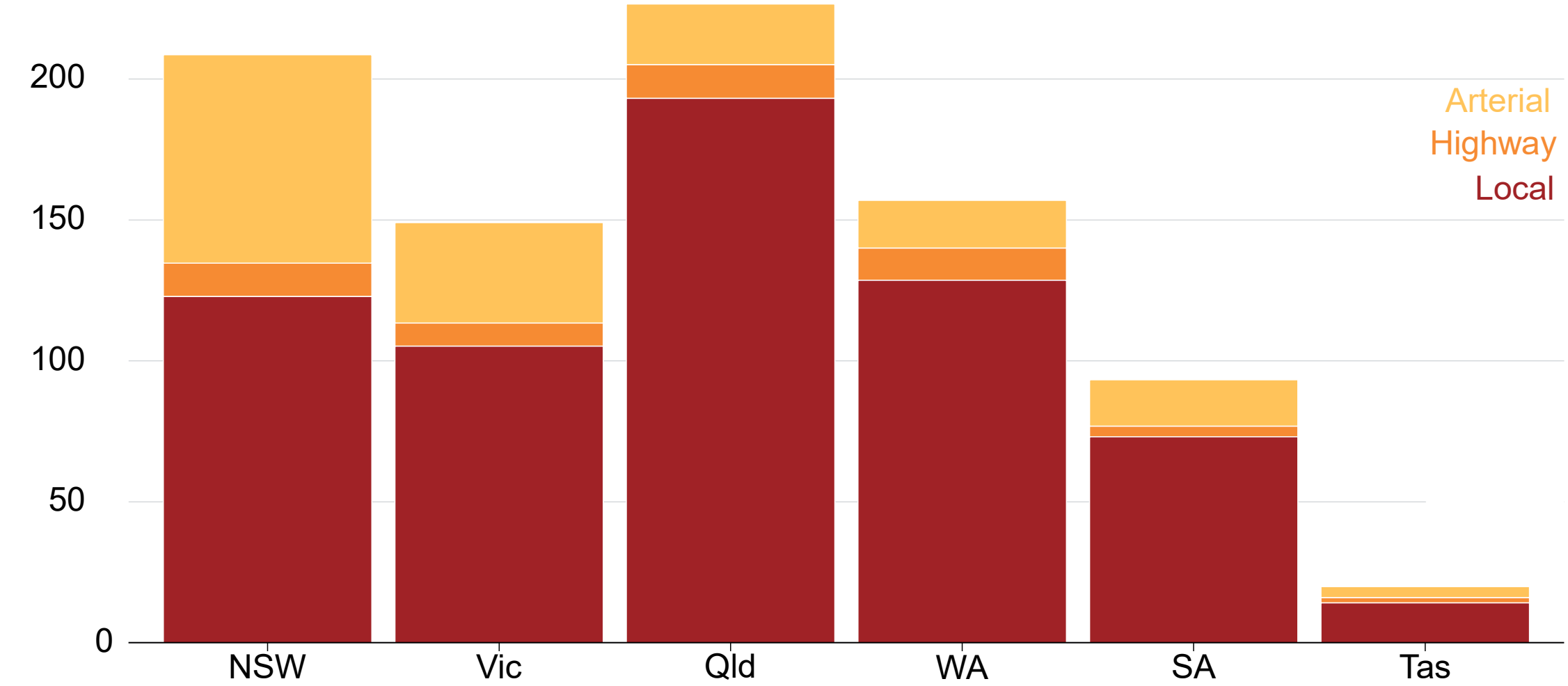
Road-related revenue and expenditure ($bil)



Note: 2018-19 dollars.
Source: BITRE 2020

Local roads dominate the road network

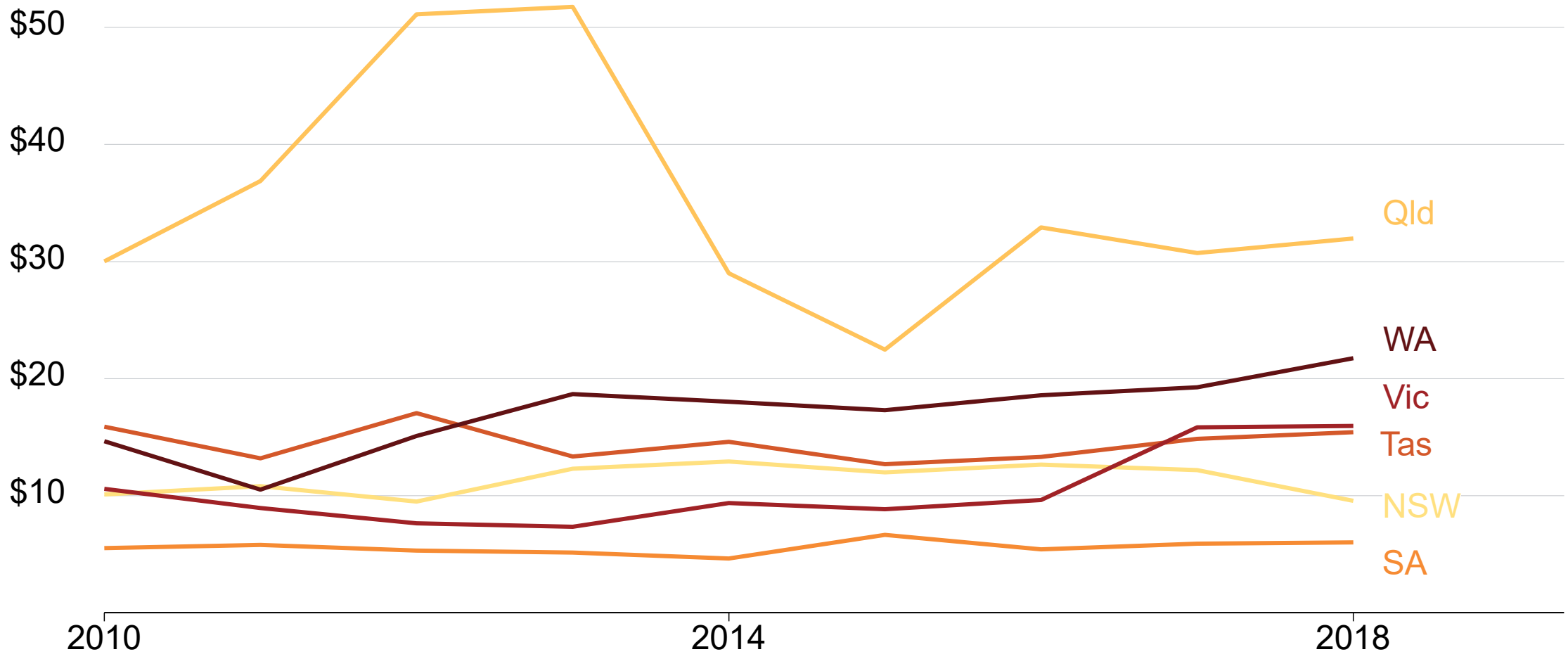
Kilometres, thousands



Source: BITRE Yearbook (2021), Table 6.2a

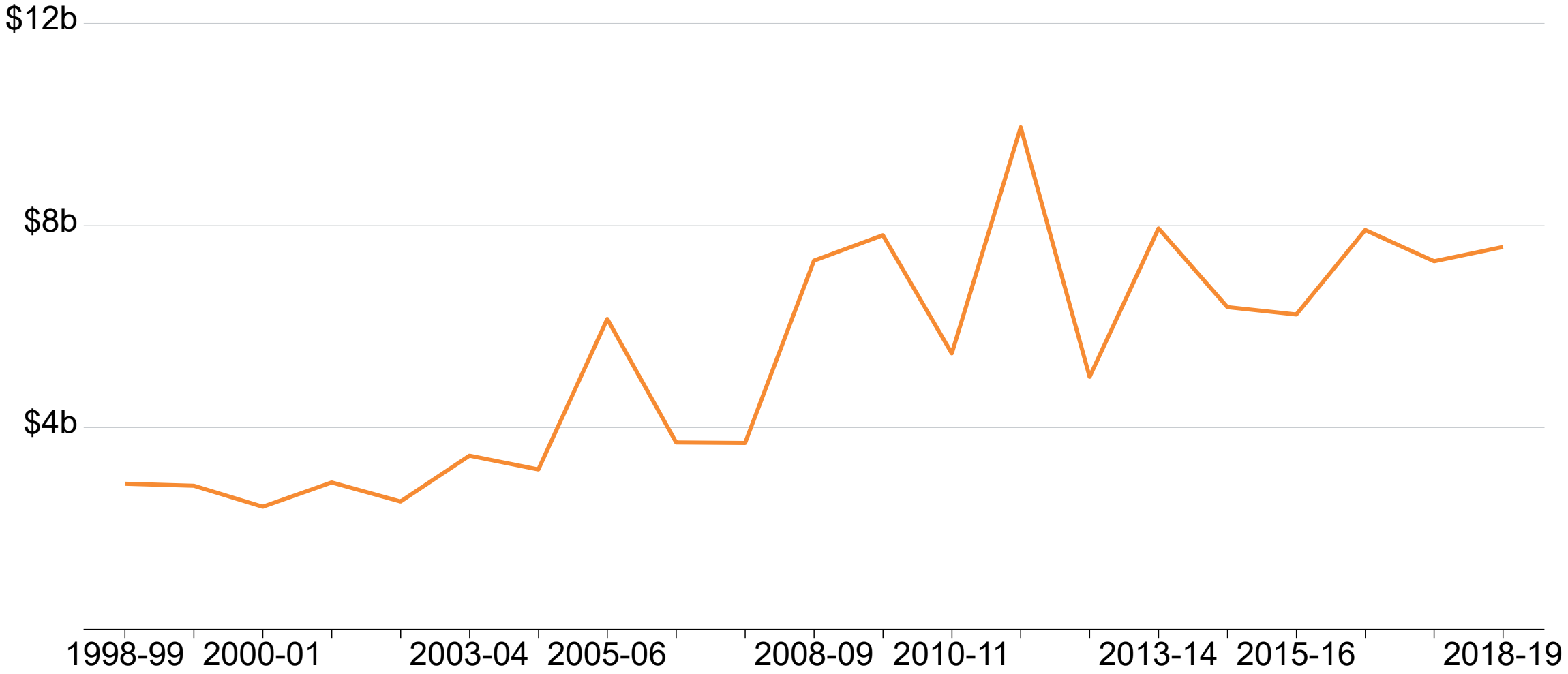
Data is scarce, but maintenance on arterials is broadly steady

Dollars spent on maintenance per kilometre of arterial road network, thousands



Notes: Arterial road and bridge maintenance expenditure, constant 2019-20 prices, adjusted by BITRE Road Construction and Maintenance Price Index—Road maintenance sub-index. The size of each arterial network is measured in kilometres. Expenditure data is by financial year, with the first half of the financial year reported here (e.g. 2010-11 reported as 2010).
Source: BITRE Yearbook (2021), Tables 6.2a and 6.15

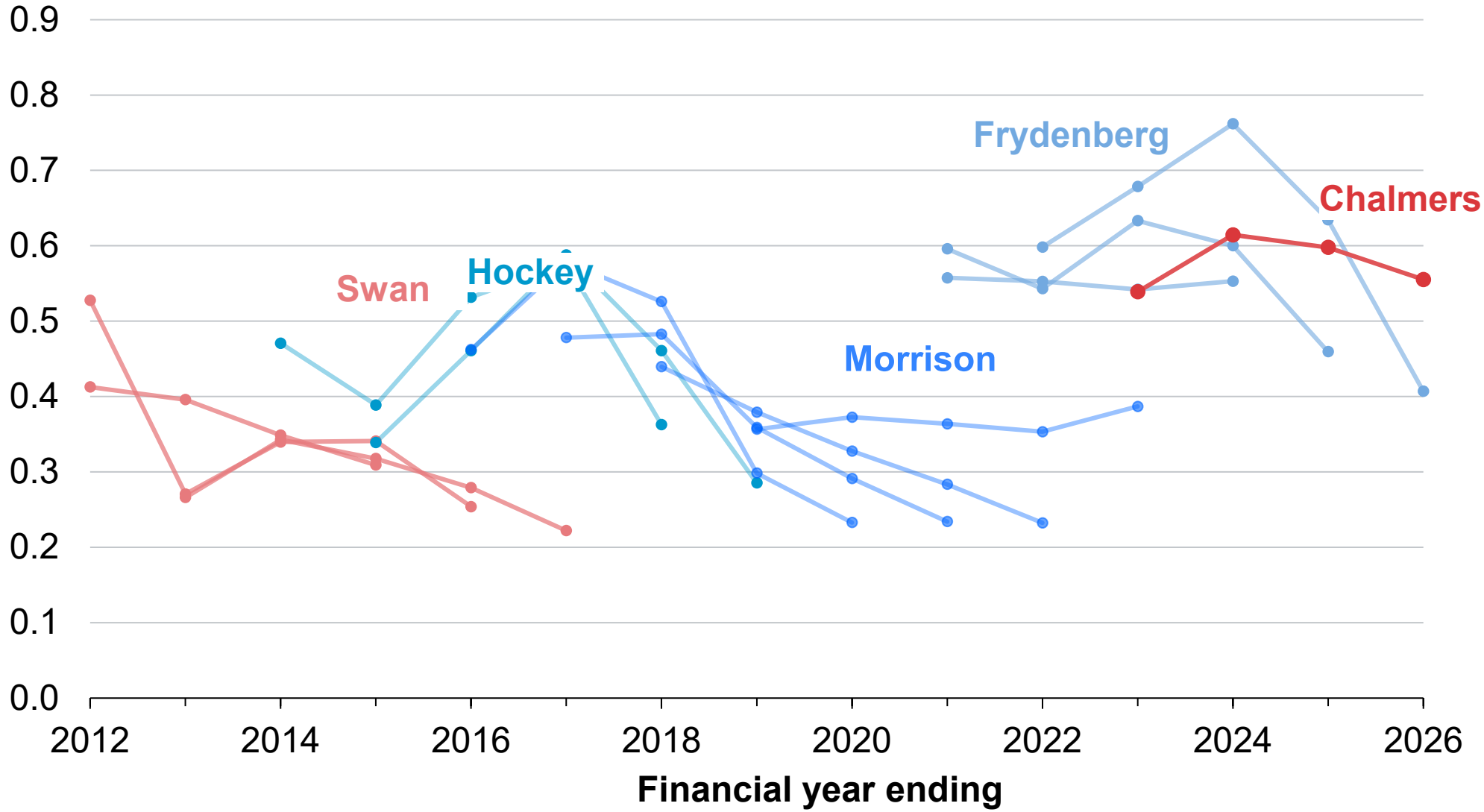
Federal transport spending is growing in absolute terms….



Notes: Total federal road- and rail-related expenditure. CPI 2018-19 adjusted dollars.
Source: BITRE Yearbook 2011, 2011.

Treasurers Chalmers and Frydenberg have committed more to transport than their predecessors

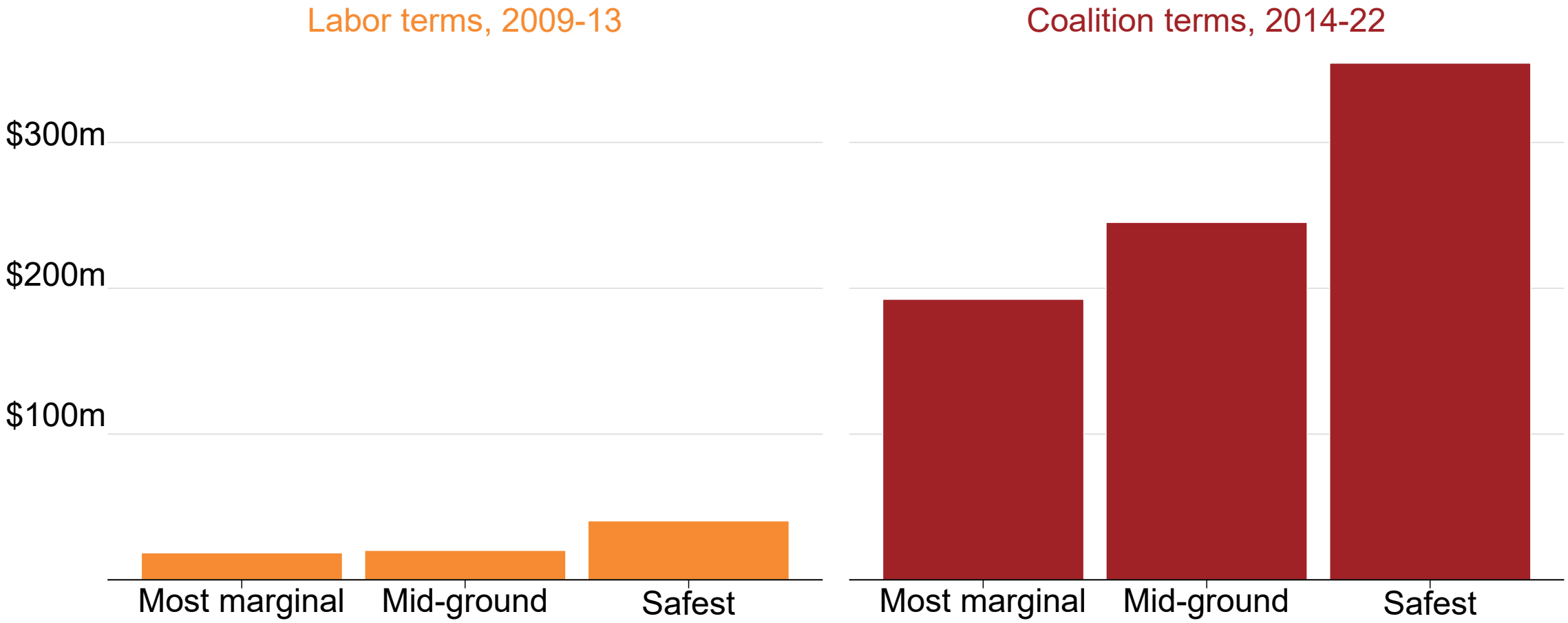
Estimated transport infrastructure spend, per cent of GDP



Sources: Commonwealth budget papers (each budget includes spending estimates spanning the previous financial year to the financial year in three years' time.

Spending on small, local transport projects has grown, especially in safe seats

Average yearly federal government expenditure on transport projects worth less than $10 million, by electorate, from 2009 - 2022

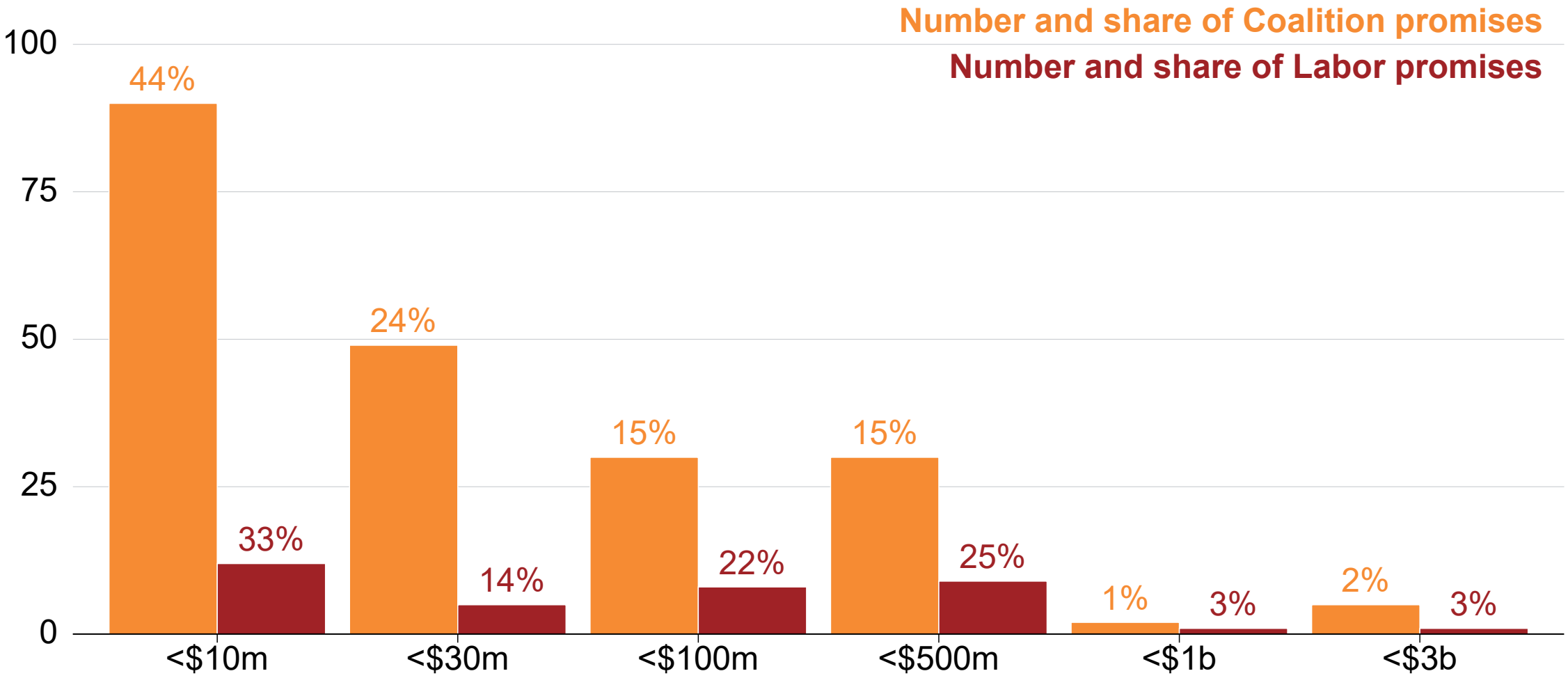


Note: Each bar includes a third of all seats. Yearly average spend is calculated by summing total spending during periods (where data is available) and dividing by length of terms for respective governments. The electorate margin is based on an average two-party-preferred margin across five elections between 2007 and 2019. Transport spending includes funds allocated to projects from 2009-2022. When projects span multiple electorates, the full project value is credited to each electorate separately.

Source: DITRDC (2022), AEC (2004), AEC (2007), AEC (2010), AEC (2013), AEC (2016), AEC (2019a) and AEC (2019b).

In the 2022 election campaign, both major parties made lots of small promises

Total number of promises in each funding range



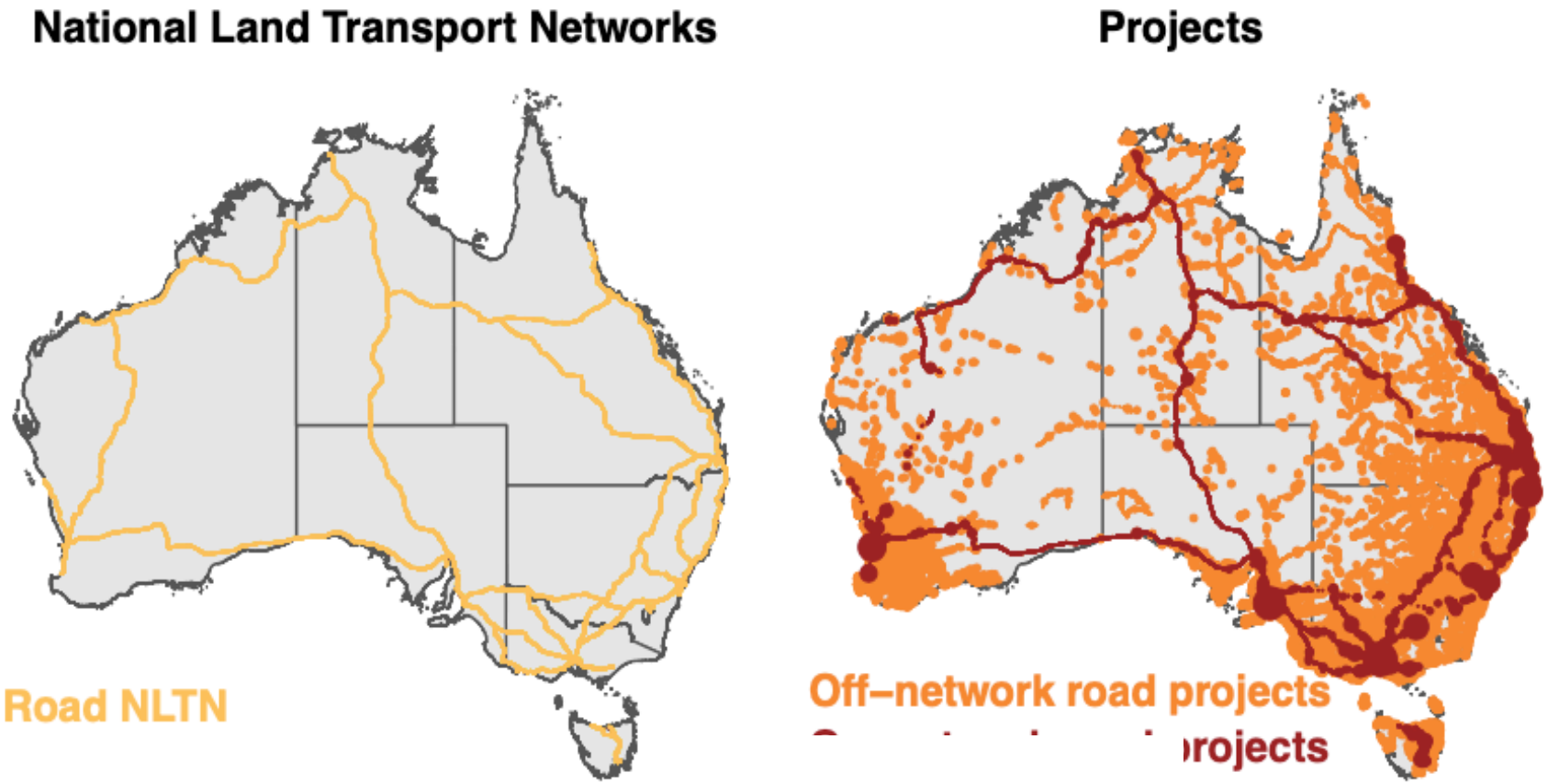
Source: Guardian Pork-o-Meter data. Notes: Data downloaded 13 May, 2022. Includes promises from 1 January to 10 May, 2022.

Federal governments have funded lots of roads outside the National Network

Federal investment and planned investment in road infrastructure since 2009

National Road Network

Off-Network road projects
On-Network road projects

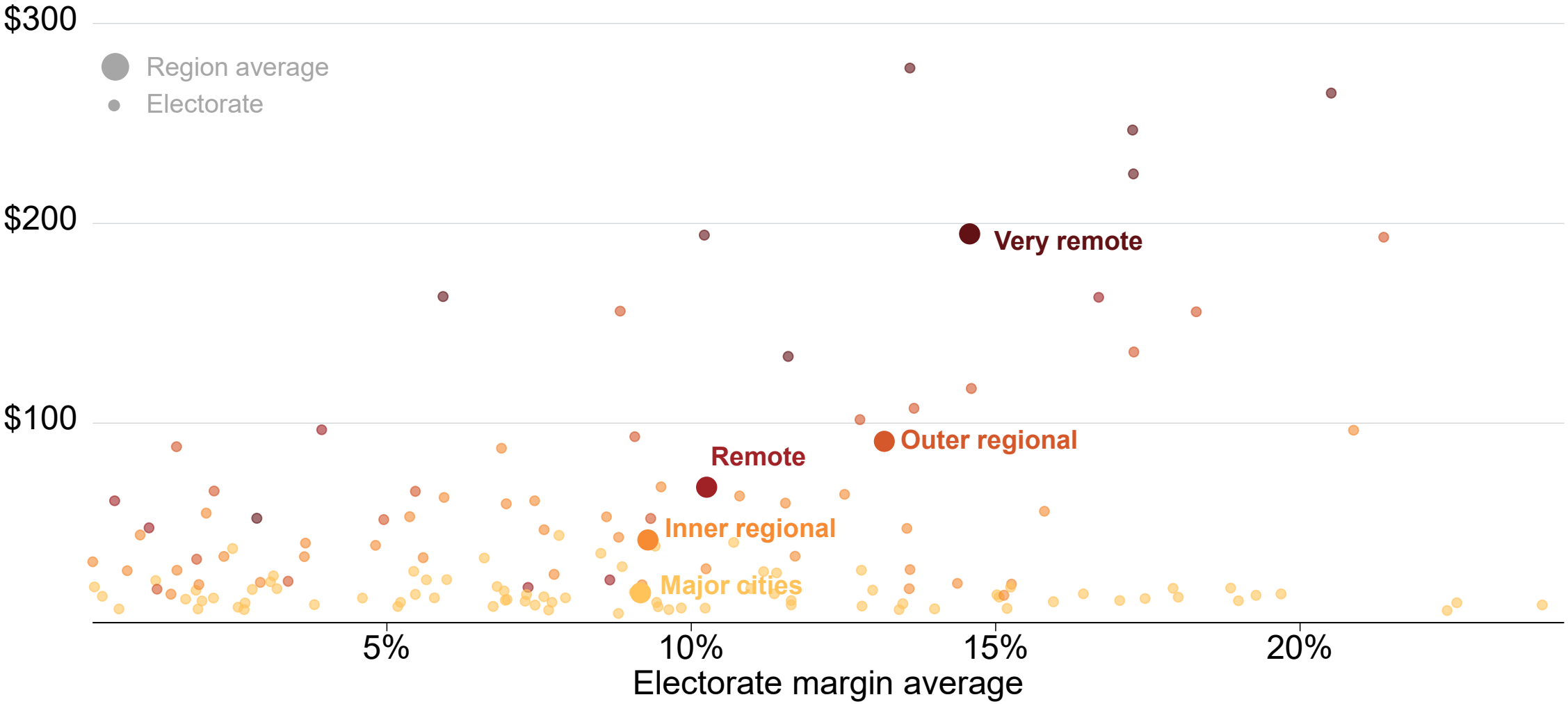


Notes: The National Road Network and National Rail Network are part of the National Land Transport Network.
This chart includes the predecessor programs to the National Network: Auslink and the National Building program. The most up-to-date road and rail network are depicted.
Source: DITRDC (2022)

Rural areas tend to benefit more from programs with more objective and transparent funding criteria

GRATTAN Institute

Federal spending ($m) on Black Spot and Roads to Recovery projects worth less than $10 million, 2009 to 2022

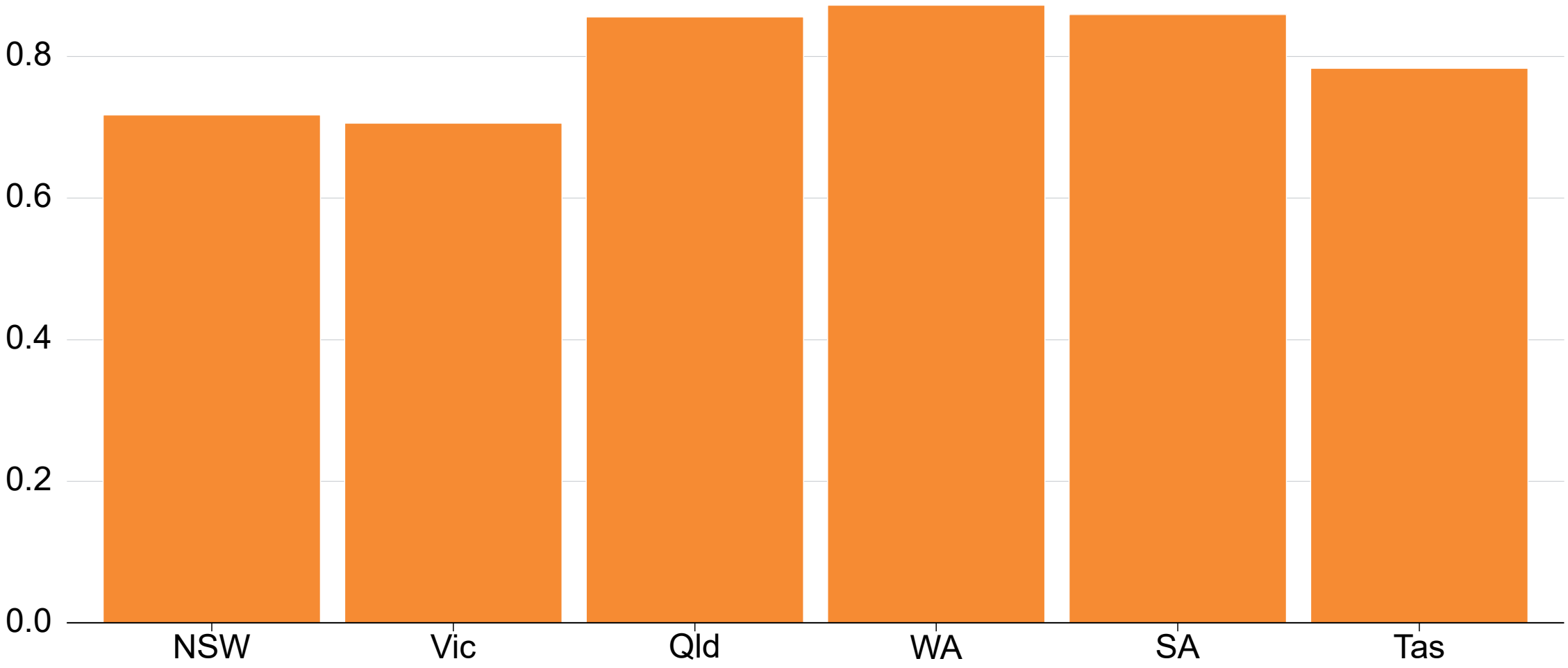


Notes: Two-party preferred data from AEC. Data from Labor term in 2007 and 2008 not available. Electorate margin average based on five elections between 2007 and 2019. Party seat allocations based on 2019 election results. Spending includes funds allocated to projects that have not begun construction at time of writing. Projects spanning across electorates are considered as more than one project.

Sources: DITRDC (2022), AEC (2004), AEC (2007), AEC (2010), AEC (2013), AEC (2016), AEC (2019a) and AEC (2019b).

Most local roads are in non-urban areas

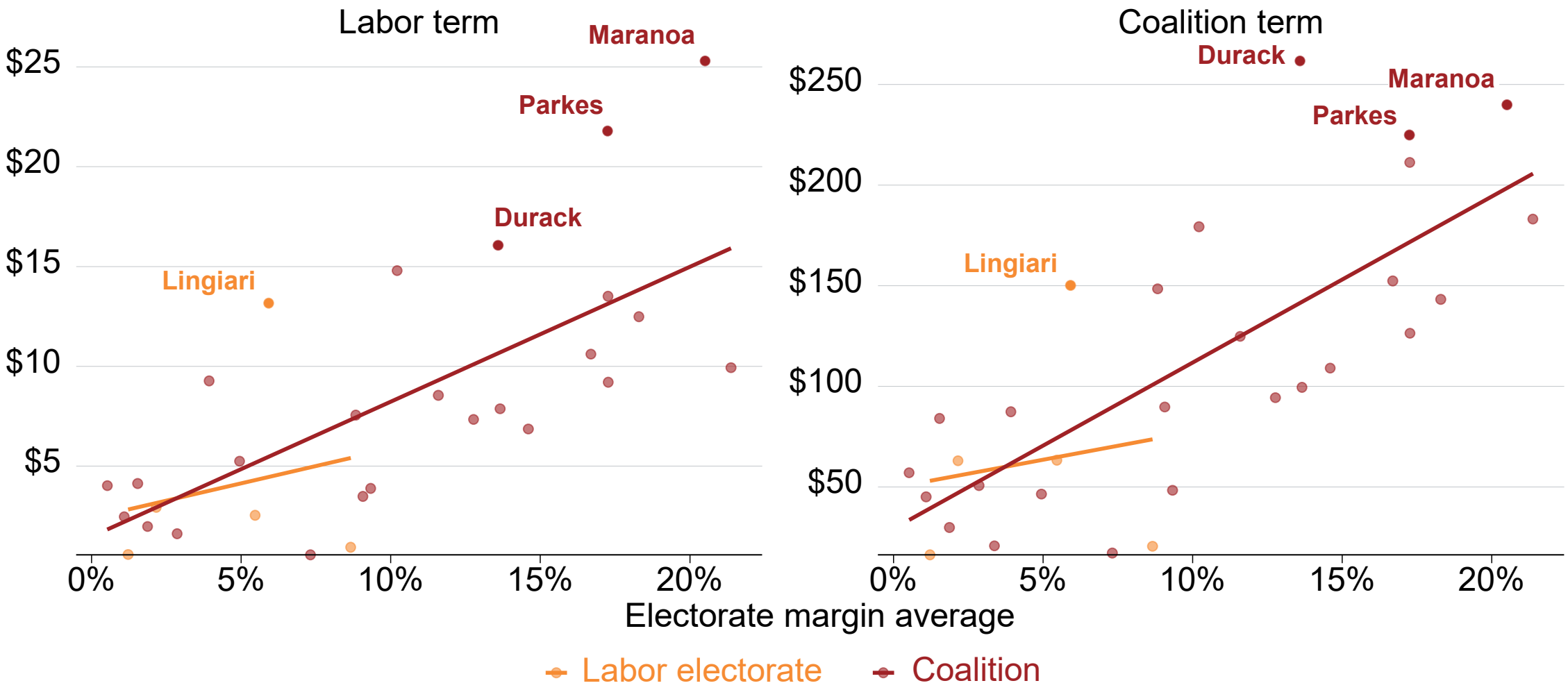
Per cent of local roads in non-urban areas



Notes: The size of each network is measured in kilometres.
Source: BITRE Yearbook (2021), Table 6.2a

Rural areas are just as likely to benefit under Labor as Coalition governments when funding criteria are objective and transparent

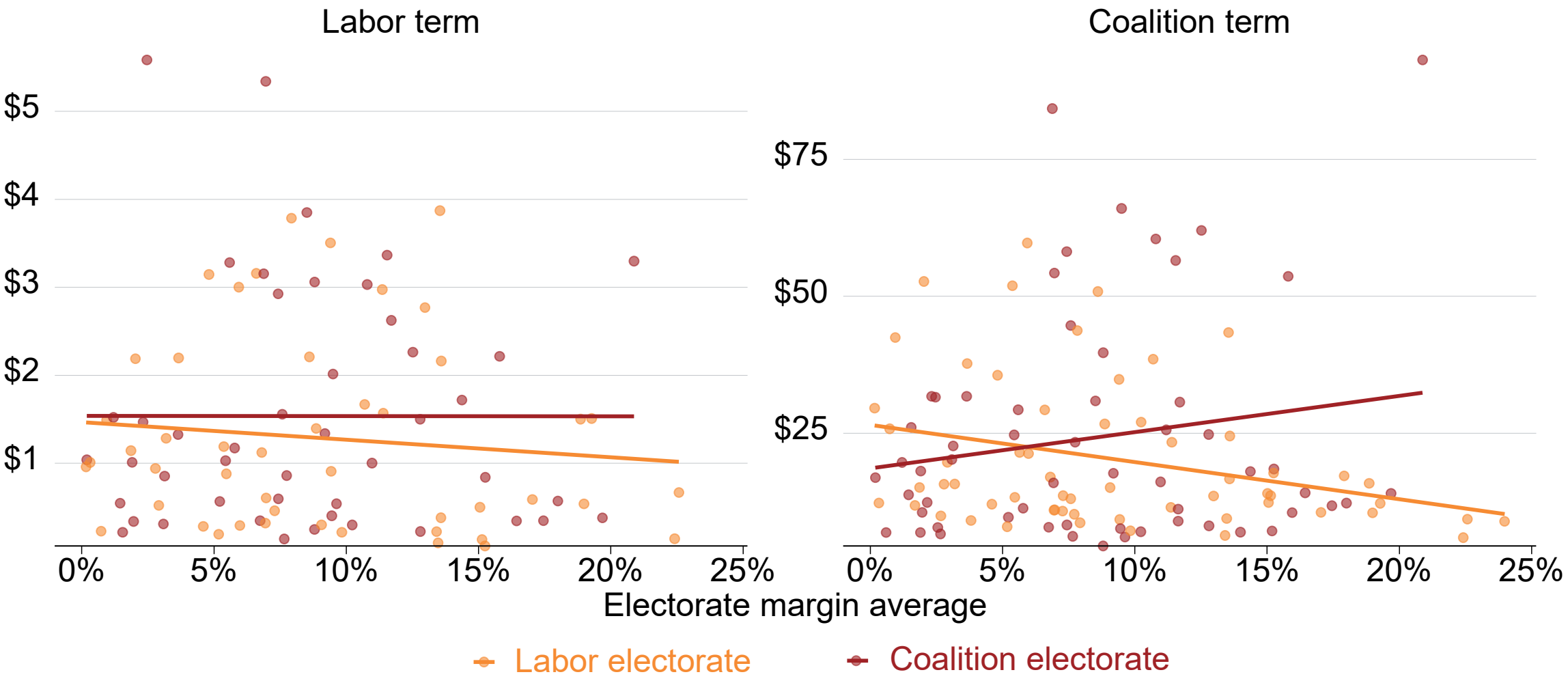
Federal spending in rural and remote electorates ($m) on Black Spot and Roads to Recovery projects worth less than $10 million, 2009 to 2022



Note: Average electorate margin based on AEC two-party preferred data for five elections. Data from Labor term in 2007 and 2008 not available. Party seat allocations based on 2019 election results. Transport spending includes funds allocated to projects that have not begun construction at time of writing. Projects spanning across electorates are considered more than one project.

Funding allocation tends to be even-handed if criteria are objective and transparent

Federal spending in urban electorates ($m) on Black Spot and Roads to Recovery projects worth less than $10 million, 2009 to 2022

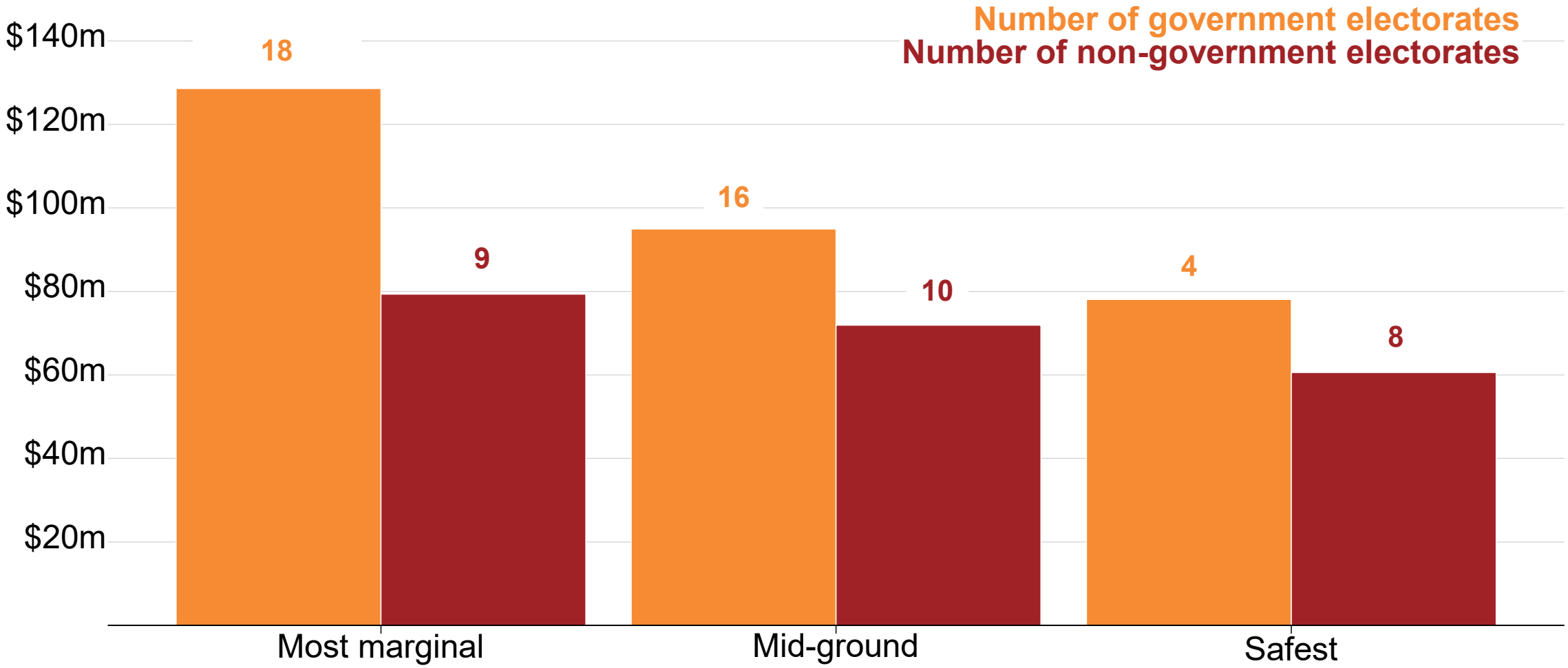


Note: Average electorate margin based on AEC two-party preferred data for five elections. Data from Labor term in 2007 and 2008 not available. Party seat allocations based on 2019 election results. Transport spending includes funds allocated to projects that have not begun construction at time of writing. Projects spanning across electorates are considered more than one project.

Discretionary funds flow mainly to marginal electorates, especially electorates in government hands

GRATTAN Institute

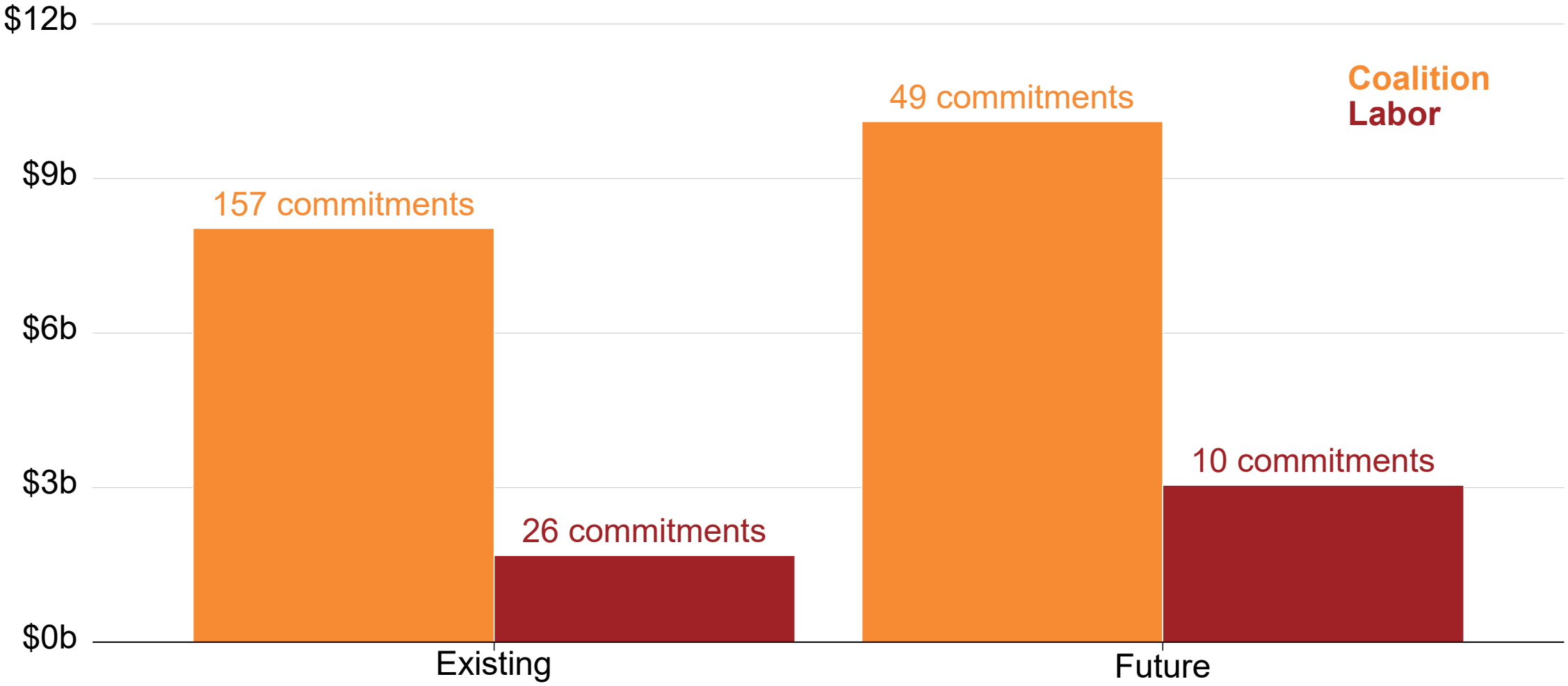
Average federal expenditure on Urban Congestion Fund projects



Includes all available data on UCF funding and commitments. Electorates are classified as 'most marginal', 'mid-ground' or 'safest' based on their two-party-preferred margin; each category includes a third of all Australian electorates. Electorates receiving UCF funding are over-represented in the 'most marginal' category. The value of projects spanning multiple electorates is attributed to each electorate separately and in full.

In the 2022 election campaign, both major parties promised to spend more on new projects than on upgrades to existing infrastructure

Total value of promises for new and existing infrastructure



Source: Guardian Pork-O-Meter Data. Notes: Data downloaded 13 May, 2022. Includes promises from 1 January to 10 May, 2022.

From megaprojects to maintenance

We're building megaprojects like there's no tomorrow

- All the growth is in megaprojects
  - Cost overruns are a problem
  - Bigger projects are riskier
  - Prematurely announced projects are riskier

Does more spending on megaprojects mean less spending on maintenance?

- Spending on roads across all levels of government is on the rise
  - But the spending isn't growing equally across all levels of government
- Rising road spending does not appear to mean rising maintenance spending
  - Because the Commonwealth is spending more in relative as well as absolute terms
  - And because the quality of transport spending is often poor

Looming challenges

- Frequency and severity of natural disasters
- Mountain of debt

What can be done?