

GUIDING LIFE'S JOURNEYS FOR OVER 110 YEARS.

New Zealand Automobile Association



New Zealand Productivity Commission Low-emissions economy Issues Paper

NZAA Submission

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NEW ZEALAND

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Submission To: New Zealand Productivity Commission

Regarding: Low-emissions economy

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Attention: Low-emissions economy inquiry

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Note

The NZAA requests an opportunity to present this submission orally.

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Background on the New Zealand Automobile Association

The NZAA is an incorporated society with 1.6 million Members. Originally founded in 1903 as an automobile users advocacy group today it represents the interests of road users who collectively pay over \$2 billion in taxes each year through fuel excise, road user charges, registration fees, ACC levies, and GST. The NZAA's advocacy and policy work mainly focuses on protecting the freedom of choice and rights of motorists, keeping the cost of motoring fair and reasonable, and enhancing the safety of all road users.

The NZAA sees itself as having a role to play and an essential voice when discussing a transition to a lower-emissions economy, specifically in the transport sector. This transport expertise is supported by regular NZAA surveys on its Members that provide significant insights into the patterns, practices and needs of transport users across New Zealand.

Introduction

The NZAA is pleased to make the following submission in response to the New Zealand Productivity Commission's inquiry into a transition to a low-emissions economy.

In terms of our response, we have not set out to address all the issues raised, but have confined our comments to areas in which we have experience and sector expertise, and where that can also be shaped by our extensive Member surveys. Much of our work in this space, particularly on park and ride and congestion charging, is largely confined to Auckland, but could have practical application throughout New Zealand if / or when it is needed.

Content of this Submission

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Executive Summary:

transitioning to a lowemissions economy

New Zealand, in some role or another, has been part of the global fight against climate change and global warming. Most recently, our Government ratified the Paris Accord in October 2016. As part of that agreement, New Zealand is legally bound to our target of 30% below 2005 greenhouse gas (GHG) emissions, with aims to meet an ambitious goal of 50% below 1990 levels of GHG in the atmosphere by 2050.

The Productivity Commission (the Commission) has been tasked with identifying how New Zealand can maximise the opportunities and minimise the costs and risks of transitioning to a lower netemissions economy in order to meet these goals. The Commission has sought feedback from a variety of sectors that attribute to New Zealand's emissions with an aim to identifying opportunities to reduce those emissions. It has also sought advice on barriers that currently exist.

Given the NZAA's wide reach with its 1.6 million Members and broad survey capabilities, we are in a position to advise the Commission on the following:

- NZAA Member views on EVs; including awareness and accelerating uptake within New Zealand;
- Suggestions for policy considerations in accelerating EV uptake;

- Further opportunities and barriers to reducing emissions in transport across New Zealand; specifically:
 - Congestion easing; Fuel efficiencies, including fuel efficient driving and feebate regulation; Intelligent Transport
 Systems (ITS) including smart parking technology, travel information and network optimisation; Congestion charging; Alternative modes including trip substitution, flexible working arrangements and park and ride.

Responses to the Commission's transport-related questions

Question 8: What are the barriers to the uptake of electric vehicles in New Zealand?

The NZAA first surveyed its Members on electric vehicles (EVs) in 2015, and again in 2017. Some 3,500 Members were surveyed on their attitudes, knowledge and opinions on affordability, battery life, range and maintenance. Our findings below form what we consider to be the barriers to uptake of EVs in New Zealand.

NZAA Findings directly impacting barriers to uptake:

A lack of charging infrastructure is feeding into range anxiety

Presently New Zealand does not have huge demand for EVs, although that will likely change over the next vehicle fleet lifecycles. As such, there has been limited investment into charging infrastructure throughout the country. This lack of charging infrastructure, though, seems to feed directly into our Members' anxieties and lack of confidence in purchasing an EV.

Some 97% of AA Members only drive over 50 km from home a few times a year, and could feasibly

use an EV most days of the week, particularly in a work commute. However, our Members are not confident that the charging infrastructure is available at the other end should they require recharging. Studies undertaken over the last decade have suggested that visible recharging stations in the community had a positive effect on intentions to purchase an EV.2 More visible charging stations, including on-street facilities, could play a key role in this space. Overseas governments have provided incentives to build EV charging infrastructure, and we are seeing that with more recent announcements from the 2014-2017 National-led government as part of the 2017 Electric Vehicle Programme, announced in May 2016.

2. There is a distinct lack of EV awareness

Research has been conducted into developing EV policy for New Zealand, and part of that includes improvement of public awareness. The NZAA's research supports the need for this given 92% of our Members surveyed claimed to have 'not much' or 'little' awareness of EVs.

3. There is a plethora of EV misconceptions (including cost) that need to be corrected

Cost is frequently raised as a main barrier to entry

for EVs. However, this issue is slowly becoming less relevant given the declining price of EVs in New Zealand. The Nissan Leaf was the first (full) EV on the New Zealand market in July 2012 at a cost of \$70,000. By July 2014, that was reduced to \$39,990, and now a cursory glance on auction site Trade Me sees second-hand options for approximately \$10,000. Notably, over 50% of NZAA Members surveyed still considered EVs to be unaffordable, with 32% seeing them as 'possibly affordable'. Yet based on nominated purchase price of our Members' next car, if EVs can be priced at \$32,000 or below, they will fall into most people's vehicle purchase expectations. Affordability perception may include a number of factors, including range as referred to above, as well as maintenance (including battery life) and support uncertainty, particularly given the real need for specialised skills and retraining in the automotive sector with increased EV uptake.

4. There are few financial incentives directed towards EV uptake

The New Zealand EV programme provides few financial incentives when contrasted with global comparators; specifically purchase price subsidies, subsidised finance, akin to the Warm up New Zealand home insulation policy, or subsidised installation of charging units. This will be discussed below.

Recommendations to the Productivity Commission as a result:

 Continue investment into charging infrastructure to combat range anxiety, and set a volume-based target of charging stations across the country by 2021 (aligning with the current EV programme, and extending NZTA target of EV chargers across the State Highway network and collector roads)

- Continue to utilise \$1 million educational and promotional fund in a manner that combats misconceptions and raises awareness in target markets
 - NZAA is able to offer survey data on key markets for EVs
- Consider further financial incentives including but not limited to purchase price subsidy, but also look to international examples of best practice³

Question 9: What policies would best encourage the uptake of electric vehicles in New Zealand?

Policy

The current EV policy programme has a comprehensive package supporting current and potential EV drivers and owners. It provides a number of incentives (both financial and non-financial) including Road User Charge exemptions through to 2021, and prioritising EVs by allowing them to use bus and high-occupancy lanes on the State Highways and local roads. Research and leadership is provided in this space through the EV Leadership Group across business, local and central government which will guide further policies where necessary. The NZAA is a member of this leadership group.

Other policy options could look at feebate measures (discussed below), or the introduction of direct purchase price subsidies for EVs, similar to that of the Netherlands, Norway, Japan and China. An investigation into other incentives including changes

to Fringe Benefit Tax, depreciation rates or discounted insurance premiums, in order to assess their application to New Zealand would also be prudent. Significant attention, however, should be given to the \$1 million dedicated to educational and promotional material given our findings that misconceptions about EVs remain.

Recommendations to the Productivity Commission as a result:

- Continue with current financial and nonfinancial incentives, and consider purchase price subsidy
- Investigate other financial and non-financial incentives
- Consider feebate measures
- Utilise \$1 million educational and promotional fund in a manner that combats misconceptions and raises awareness in target markets

Question 10: In addition to encouraging the use of electric vehicles, what are the main opportunities and barriers to reducing emissions in transport?

Congestion Easing: an opportunity to reduce emissions

Heavily congested roads means more vehicles producing more emissions. With increasing numbers of vehicles⁴ on some at-capacity roads in our larger cities, particularly Auckland, congestion is crippling the city's economy⁵ and forming a large barrier to our transition to a lower-emissions economy.

Specific measures to target congestion should be seen as opportunities to transition to a low-emissions economy. Cities like Christchurch with shorter peak periods of congestion should be seen as the benchmark, rather than Auckland with its highly variable and volatile congestion across the day. These congestion easing measures are outlined below, and the data is supported by AA Member surveys into congestion, including our annual congestion surveys and specific surveys of the main centres.

The NZAA would stress to the Commission that the answer to congestion easing is not a simple case of taking private vehicles off the road, which would damage productivity in other areas of our economy. Given the huge constraints of public transport in New Zealand, there must be other levers that can be pulled in order to ease congestion and still provide the option to use a private vehicle.

It should also be noted that private vehicles only make up 12% of total emissions in New Zealand. Attention must be also directed towards the heavy-diesel fleet, as it represents only 4% of the national fleet yet makes up 21% of transport emissions. This will remain an issue for the country even with 100% conversion of private vehicles to EVs.

Auckland congestion

Member feedback tells us that private vehicles are the main mode Aucklanders choose to get to work, and convenience, speed and reliability are key factors in driving this. Many Aucklanders consider they have no choice but to drive daily in peak congestion because they rely on their car during the day, after school or work, require it for family commitments, and around

⁴The current vehicle fleet is 3.9 million, with cars and SUVs making up 78% of that. See Ministry of Transport, *Transport Outlook Current State 2016*, June 2017, p.7

⁵"Benefits from Auckland Road Decongestion", NZIER report to the EMA, Auckland International Airport Limited, Ports of Auckland, National Road Carriers Association, 10 July 2017.

^{611.67%} according to the Ministry of Transport, Annual Fleet Statistics

⁷Zero Emission Vehicles presentation to the "Yes We Can" Symposium, Wellington, 31 May 2016. See http://events.bioenergy.org.nz/documents/events/ZeroEmissionVehicles-Reducing-Emissions-in-the-NZ-Commercial-Fleet.pdf.

50% of Members⁸ don't have a feasible alternative. As a result, congestion is only getting worse. The average journey into the CBD from Papakura in 2013 took 46 minutes. In 2016, that journey had increased to 67 minutes.⁹ Increases like this are seen city-wide, and

we will only face more of this as we see exponential population growth. Based on current projections, New Zealand is set to see a population increase to 6 million by 2045 with 40% of that residing in Auckland.¹⁰

Typical Auckland NZAA Member Example:

Auckland AA Member Jon recently bought a home in Riverhead due to skyrocketing Auckland Central house prices. He also works in the Auckland CBD. As part of his most recent salary negotiations, he was

advised that there would be no increase in salary due to company performance, but that in lieu of that a carpark could be provided.

Currently, Auckland Transport provides no journey options using public transport to get to the Auckland CBD. Because Jon lives in Riverhead, he feels he needs to get ahead of the traffic to reduce the time spent in congestion. He leaves the house at 6.15am and his route takes 35 minutes, encountering a less-congested, but still traffic-

heavy North Western motorway, arriving at work at 6.50am. His wife, Mena, organises the daycare drop off and pick up as Jon can't get home reliably by 4pm every day when travelling back to Riverhead from the CBD. She works in Constellation Drive,

Rosedale, travelling in the opposite direction to Jon. This precludes any form of carpooling together, though still could allow for close neighbours and friends/family. Mena doesn't start until 10am, so

she can drive in less congested roads, but in the afternoon it still takes her 35 minutes to get to daycare from Constellation Drive in the Auckland extended peak.

Auckland Transport provides no public transport options for Mena either.

In a typical Auckland family, with typical issues like commuting to work and picking up children from daycare, we still see two single-occupant cars for the majority of their weekday journeys. Some days, Jon is able to work from home and can walk the 11 minutes to pick up his child from daycare

at the start and end of the day, but this is not an opportunity afforded to him every day.

Public transport does not and cannot feature in their day-to-day commute.

Auckland Quick Facts:

60% - Getting to work by a specific time is 'critical'

70% - unable to change working hours

83% - Drive alone to work

80% - drive because they need to¹¹

48% considered moving house or changing jobs to avoid congestion

45 minutes – the average time home from work

 $^{^{\}rm 8}$ In the NZAA's Annual Nationwide Congestion survey, around 50% of respondents say it is impossible to consider using public transport for their trip.

⁹NZTA figures, Auckland Matters: Auckland's Congestion May 2016 ¹⁰See Statistics New Zealand, "Population projections overview": http://www.stats.govt.nz/browse_for_stats/population/estimates_

and_projections/NationalPopulationProjections_HOTP2016.aspx and http://m.stats.govt.nz/browse_for_stats/population/estimates_and_ projections/projections-overview/subnat-pop-proj.aspx, last updated 8 March 2017.

¹¹Need being: need to carry people, need to carry things, need to for work-related purposes, need to for personal travel

Wellington congestion

While not facing the same size and scope of congestion as Auckland, our congestion data tells us that Wellington commuters also face a daily congestion battle across the city. Typical commuter routes like Plimmerton to the CBD are facing average times of 36 minutes, and Lower Hutt to the CBD is not far behind with average driving times of 26 minutes in the morning peak. The reality is the majority of Wellington Members can't easily avoid congestion on their journey to and from work. With 80% of our Wellington Members indicating they need their vehicle during the day for one reason or another, congestion-easing initiatives that focus solely on modal shift may have limited success.

Christchurch congestion

More akin to Wellington than Auckland, travel time variability is not a huge issue for those in the Greater Christchurch region, and initiatives that are aimed at reducing travel times are favoured over more reliable times. Christchurch faces shorter morning peak periods, mainly from 7.30am to 8.30am according to our own congestion data. This is also greatly affected by significant road works post-earthquake. With less congestion on the roads overall, though, Christchurch Members are in a position to modify their travel behaviour with more exposure to travel information. This could result in quick wins for Christchurch's congestion issues.

Wellington Quick Facts:

70% - rely on a car to get to work

30% - Getting to work by a specific time is 'critical'

32% - considered moving house or changing jobs to avoid congestion

78% - want faster journey times on their commute

80% - drive because the need to14

35 minutes – the average time home from work

Christchurch Quick Facts:

91% - Have no choice but to travel to work by car

30% - Getting to work by a specific time is 'critical'

32% - considered moving house or changing jobs so as to avoid congestion

8am – average time leaving home for the day

30 minutes – the average travel time home from work

 $^{^{\}rm 12}\text{Please}$ refer to the NZAA Wellington congestion infographic attached.

¹³The morning peak is defined as 7am – 9am.

¹⁴Need being: need to carry people, need to carry things, need to for work-related purposes, need to for personal travel

Recommendations to the Productivity Commission as a result:

- Consider congestion reducing measures as opportunities to transition to a lower-emissions economy
- Ensure that the transport net is spread wider than public transport measures only; it will work for some, but it will not work for many

Fuel-Efficient Driving

Research suggests that up to 20% of fuel consumption can be saved throughout more efficient driving and the NZAA is highly supportive of initiatives that enable this. The NZAA's own rigourous testing has established a number of ways to preserve fuel.¹⁵

The NZAA is aware that some level of regulation may be required in this space if the social and economic case is proved, however any policies and associated costs should be in proportion to the share they contribute.

Regulation: feebate

Consideration could also be given to developing a feebate system linked to fuel economy standards.

A feebate system provides another policy lever to the government to reduce vehicle emissions and increase EV uptake as well as uptake of more fuel efficient ICE vehicles. The feebate system would impose a one-off fixed penalty on vehicles with high ${\rm CO_2}$ emissions or fuel consumption being brought into the country and provide a rebate to vehicles with low ${\rm CO_2}$ emissions or fuel consumption also being imported. Feebate systems can be revenue-neutral, or they can be supplemented by government funding.

Should such a system be implemented, the NZAA believes consideration should be given to developing a 'best in class' criteria. Where, for instance, a large family requires a large vehicle, it means they are able to choose vehicles that are 'fit for purpose' and can purchase the most efficient in the class, which does not incur a penalty. These criteria (which could also include safety equipment) could be also applied as part of minimum standards for public and private fleets, with additional incentives like a Fringe Benefit Tax discount or lower insurance premiums for vehicles that meet the standards.

If imposed in New Zealand, this system would not preclude less efficient vehicles being brought into the country, but it would mean that a higher cost would be artificially imposed on them and likely passed on to the consumer. This would serve to encourage vehicle importers to source the most fuel-efficient models in each vehicle class. Should a feebate be implemented in New Zealand on new and used imports, this may encourage motorists to take measures to purchase more efficient vehicles, particularly EVs, as the price of efficient vehicles would be artificially lowered, and generate consumer demand for such vehicles.

Practical measures

In terms of efficient driving techniques, the NZAA also supports investment into driver training that could see reductions in the emissions from light vehicles in New Zealand - historically our Members indicate high levels of support for this type of initiative. Ultimately, though, there may need to be acceptance that regardless of training people will drive as they wish. Although 14% of our Members claim they drive efficiently now in light of environmental issues, we suspect this is not the case in all circumstances. There

may be some scope for the Commission to investigate and consider a reward-based system for efficient driving – potentially through a smartphone application - though we are unaware of any current initiatives like this.

We support the introduction of automatic start / stop engine systems in private vehicles and consider it useful for fuel efficiencies. Though it will only save a minimal amount of fuel from a single tank¹⁶ on a large scale, it could mean significantly better fuel efficiencies, as well as the reduction of noxious emissions in congested city traffic in pedestrianised areas.

Recommendations to the Productivity Commission as a result:

- Look to implementing minimum standards across public and private fleets, and consider other off-set incentives to encourage uptake
- Look to international examples of successful full or partial feebate schemes to assess suitability in New Zealand
- Consider small-scale practical measures such as driver training as means to reducing vehicle emissions

Intelligent Transport Systems (ITS)

Intelligent transport systems apply information and communication technologies that support and optimise all modes of transport by cost-effectively improving how they work, both individually and in co-operation with each other. The NZAA has yet to develop a final policy position on ITS, but in principle we support measures that optimise all modes of transport in a cost-efficient manner. The following

are examples of ITS in action which the NZAA does support.

Smart Parking

On average, 30% of the cars in congested downtown traffic are cruising for parking. In a year, cruising for parking creates 366,000 excess vehicle miles of travel and 325 tons of CO₂.¹⁷ To combat this, and our own Members behaviours towards parking, 18 the NZAA is currently advocating for parking operators to be encouraged to adopt smart parking technology. This requires a consistent and reliable system: meaning uniform payment systems or borderless universal parking applications that are not specific to the provider. GPS applications (whether by phone or in-car system) will direct drivers to available empty spaces and notify charges and restrictions. This will help reduce congestion, save time, and reduce fuel consumption and emissions.

Recommendations to the Productivity Commission as a result:

- Consider smart parking initiatives as congestion reducing measures
- **Encourage the rollout of smart parking** technology by the parking industry, and the uptake by motorists
- Assess the possibility of mandating consistent, uniform and reliable systems across the country, particularly in the main centres
- Engage with and secure in-principle buy-in from both public and private parking operators

Network Optimisation

and has significant detail on our Members attitudes

The NZAA is supportive of network optimisation measures and wants to see these rolled out as soon as possible, particularly in our most congested cities. This includes the following:

- Smart traffic lights, including encouragement of reverting to orange lights at significantly off-peak hours (where give way rules would apply) to reduce unnecessary fuel wastage when stationary
- Lane re-configuration at choke points
- Removal of street parking or peak period clearways
- Dynamic (tidal) lanes

This type of smaller-scale work can be completed while we wait for progress on big-ticket infrastructure projects, and we believe it provides very high benefit to cost ratio with immediate deliverables to road users.

We are currently monitoring measures like the upcoming Whangaparaoa Road dynamic lane network optimisation measures, and support these fail-fast trials across Auckland in particular.

Recommendations to the Productivity Commission as a result:

 Scope and cost an Auckland-wide network optimisation programme

Congestion charging

To combat the ever-increasing congestion and other issues facing Auckland's roading infrastructure, some form of congestion charging is currently being assessed as part of the Auckland Transport Alignment Project (ATAP). One third of Auckland AA Members agreed that the Government should immediately consider congestion charging as long as the benefits

were visible; London's introduction of congestion charging saw a 16% reduction in carbon emissions in the initial 22 square kilometre charging zone and 13% congestion reduction in the same area.¹⁹ Even with some form of demand management there may be little scope to switch to public transport as an alternative measure – public transport is simply not an option for many AA Members, with around 50% saying it would be impossible to switch their private vehicle use to public transport.

For the benefit of the Productivity Commission, we attach our *Auckland Matters Issue 7: Congestion Charging*.

Recommendations to the Productivity Commission as a result:

 Work closely with the Auckland Smart Pricing Project to determine the benefits of congestion charging and immediate and ongoing direct benefits to commuters

Alternative modes

The NZAA supports alternative modes where they are practical and convenient solutions to our Members. However, Member feedback suggests this is not always possible. The NZAA has surveyed its Members directly on trip substitution and park and ride to establish opportunities and barriers to alternative modes.

Trip Substitution

NZAA Members are public transport users – all of our recent surveys confirm this, particularly when it comes to commuting into the Auckland CBD. Around 50%

¹⁹See C40 cities http://www.c40.org/case_studies/londons-congestion-charge-cuts-co2-emissions-by-16
It is worth noting, however, that London's congestion has increased sharply in the last few years, with the city's Transport Committee recommending further congestion-easing measures including additional road charging

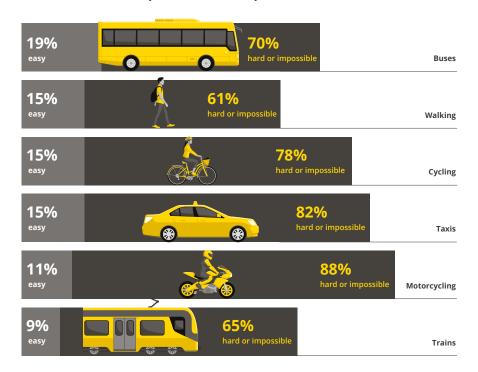
saying the current congestion charge is no longer fit for purpose. See the London Assembly's "London Stalling" https://www.london.gov.uk/sites/default/files/london_stalling - reducing_traffic_congestion_in_london.pdf, prepared in January 2017.

of our Auckland Members that commute to the city use a form of public transport to commute in every day. Overall, our Members are replacing car trips with other forms of transport, with 25% replacing car trips with walking, and 84% supporting the development of more cycle ways and biking facilities. But, when asked whether they could substitute some car trips for other specific modes of transport, we found the following:

those who experience congestion regularly would find it impossible to rideshare/carpool for their daily commute. Where the NZAA has undertaken surveys for particularly congested parts of Auckland (for instance, Lake Road on the Devonport Peninsula), the support for ridesharing outside of family members is very low.

Flexible working arrangements

Could AA Members replace some car trips with other modes?



NZAA Members perceive real issues with trying to substitute their travels for a different mode and this feeds into concerns around the functionality of the public transport network. It also demonstrates that outside of metropolitan areas most New Zealanders are reliant on private vehicles because nothing else is available.

Ridesharing

Ridesharing has little support amongst AA Members.

Our Nationwide Congestion survey suggests that even

Although the Employment Relations Act 2000 (ERA) allows for flexible working arrangements, this is not always an option our Members can use to avoid commuting on congested roads. The NZAA is currently undertaking a Member survey seeking insight into individual and collective employment agreements and Members' current requirements for on-site working hours, the ability to work from home, and the use of video-conferencing to prevent unnecessary travel. Tellingly, in Portland, Oregon, with a population comparable to Auckland, working from home

has taken more cars off the road than any other mode since 2000.²⁰ We expect the survey results will provide us with further information regarding the freedoms and limits of our Members to avoid travel.

The final results of this survey will not be available until November 2017, but we would appreciate the opportunity to present these findings to the Commission at a later date. We anticipate that the results will supplement this submission, highlighting further opportunities and barriers to reducing transport emissions and identifying economic issues in

²⁰ Since 2000, Portland has seen 23,063 people taken off the road by working from home. See http://www.oregonmetro.gov/news/you-are-here-snapshot-how-portland-region-gets-around

transition to a low-emissions economy.

Recommendations to the Productivity Commission as a result:

- Avoid seeing public transport as a silver bullet; the majority of trips cannot be substituted by these measures
- **Encourage rideshare facilities, but identify that** uptake and support will be low unless people are significantly incentivised to use them
- Work with relevant stakeholders to widen the scope of the flexible working arrangements available under the ERA and encourage active adoption by government and large organisations throughout New Zealand, as well as educating individuals
- Identify what the actual and perceived barriers are to public transport on a day-to-day basis for commuters

Park and Ride

Park and ride parking bays supporting the Auckland rapid transit network are currently at maximum capacity on a typical weekday, with commuters unable to find parking from 7am. Rather than turning to less than adequate feeder services as a means to commute into the CBD, Auckland Members will drive instead, thus increasing congestion (and therefore emissions).

The NZAA has publicly called on Auckland Transport to provide 10,000 new parking bays over the next decade which has near-universal support from surveyed Auckland AA Members. This would provide 5,000 new users to the network that would otherwise be driving.²⁰ These new users would come at a cost the cost of developing parking bays²¹ – but that cost is low compared to other big budget public transport initiatives.

For the benefit of the Productivity Commission, we attach our Auckland Matters Issue 8: Park and Ride.

Recommendations to the Productivity Commission as a result:

Consider park and ride as a congestion reducing measure, particularly until public transport can facilitate easy movement across the main centres for the vast majority

Environmental issues

We are currently undertaking a survey of our Members on where they stand on environmental issues. Although 88% of NZAA Members are conscious of being environmentally responsible, that isn't translating into travel changes. Only 31% of NZAA Members had made changes to the way they travel. This translates into:

had cutback on trips

drove more fuel efficient

had replaced some car trips with walking

had brought a more fuel-efficient car

had replaced some car trips with public transport



²⁰This is on the presumption of 10,000 new park and ride bays acrossthe city

²¹For a ground level parking facility, each park and ride bay costs around \$15,000 to build. For multi-storey facilities, the cost is closer to \$25,000 per bay.

The current environmental survey addresses Members attitudes towards New Zealand and the world's ability to meet its climate change targets; and includes how individuals' behaviours would change and their response to economic changes and increased living costs (fuel, groceries) on the basis of climate change.

The final results of this survey will not be available until mid-November 2017, but the NZAA would appreciate the opportunity to present these findings to the Commission at a later date. We anticipate that the results will supplement this submission, highlighting further barriers to EV uptake within New Zealand and identifying economic issues in transition to a lowemissions economy.

End of submission

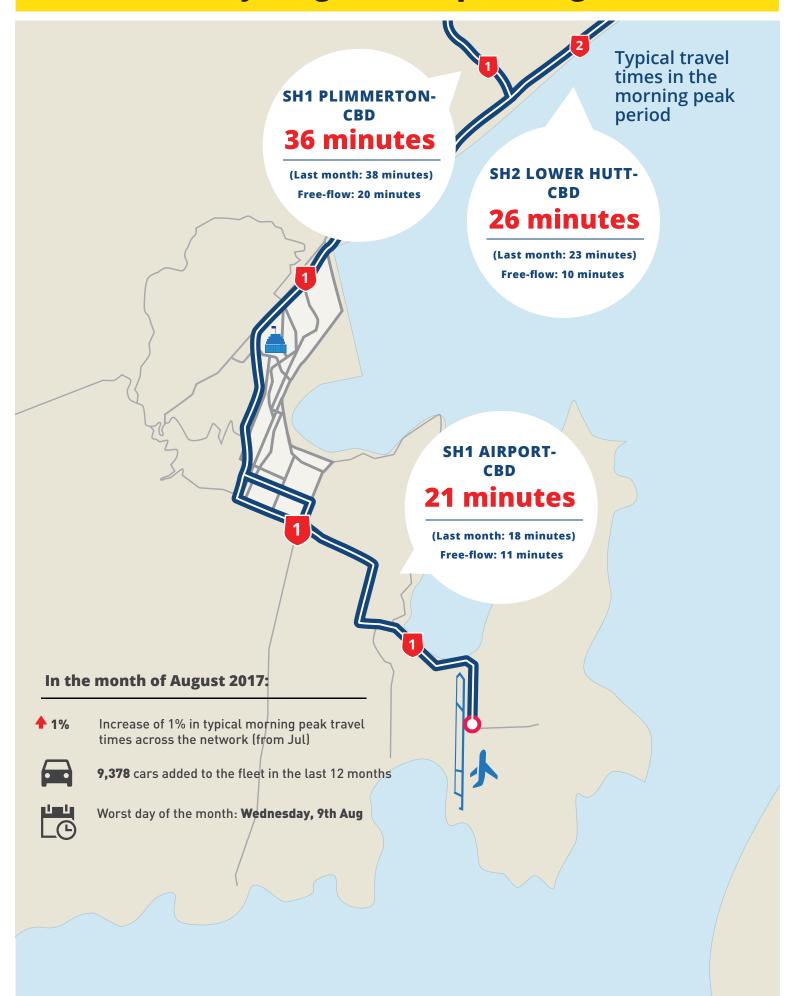
Attachments to this submission:

- NZAA August 2017 Congestion Monitoring infographics for Auckland, Wellington and Christchurch
- NZAA Auckland Matters Issue 7: Congestion Charging
- 3. NZAA Auckland Matters Issue 8: Park and Ride

AA monthly congestion report: August 2017



AA monthly congestion report: August 2017



AA monthly congestion report: August 2017 Typical travel times in the morning peak period SH₁ **WAIKUKU-BELFAST** 19 minutes (Last month: 17 minutes) Free-flow: 15 minutes **AIRPORT-CBD** 12 minutes **NEW BRIGHTON-**Free-flow: 10 minutes 14 minutes (Last month: 14 minutes) Free-flow: 12 minutes **WALTHAM-HORNBY** 16 minutes (Last month: 16 minutes) Free-flow: 12 minutes In the month of August 2017: Increase of 1% in typical morning peak travel times across the network (from Jul) 12,847 cars added to the fleet in the last 12 months Worst day of the month: Thursday, 10th Aug

Auckland Matters

The AA's Auckland infrastructure issues newsletter

London

AUGUST 2016 ISSUE 07

JOURNEYS FOR OVER 110 YEARS. New Zealand Automobile Association

GUIDING

ISSUE 7: CONGESTION CHARGING

From the policy team



his edition of
Auckland Matters
looks at the issue of
congestion charging,
and follows recent
calls by the Auckland
Transport Alignment

Project (ATAP) – an initiative aimed at developing a joint local-central transport strategy for Auckland – for a congestion charging scheme to be considered in Auckland in the future.

Talk of congestion charging in Auckland is nothing new. What *is* new is the emerging consensus of support among officials and thought-leaders for the theory and principles behind it.

Like others, we now want to see more research done to determine whether and how an Auckland congestion charging system could work in the real world.

All the same, we'd caution the Government and the Council not to lose sight of just how complex and controversial congestion charging is. Plenty of cities around the world talk about it but very few have implemented it – and none in caroriented, low-density cities like Auckland.

Officials are taking a big step just by opening the door to congestion charging. To make sure it's not a step too far, they'll need to tune into public sentiment more closely than ever.

Barney Irvine

Principal Advisor- Infrastructure

Introduction: tentative support

Auckland AA Members are ready to begin a serious conversation about congestion charging, but they're not yet ready to sign up to it.

While there's support among Auckland AA Members for some of the underlying principles of congestion charging, this is offset by deep-seated scepticism and doubt, and it wouldn't take much for tentative support to turn into definitive rejection.

If officials hope for the public to join them on the journey towards congestion charging, they'll need to remain committed to a gradual policy development programme and keep the benefits to people's mobility front and centre.

Congestion charging basics

There's a tendency to lump congestion charging and other road pricing schemes under the catch-all heading "tolls", but not all tolls are the same.

What Charging people extra to drive on congested roads, in order to encourage commuters to change when, how and where they travel and "spread the peak."

Why? The focus is demand management – that is, getting motorists to change driving behaviour – not raising extra revenue. So it's a far cry from the motorway toll proposed by Auckland Council last year (which was first and foremost a revenue tool). In an ideal world, a reduction in demand will mean a reduction in the need for infrastructure spending, and therefore lower costs for motorists.

How? Can be applied through an area charge (such as a CBD cordon) or as part of a charge covering the whole network.

Where? A handful of global examples are commonly cited:



ATAP's 'Variable Network Pricing' scheme

The mooted ATAP scheme – Variable Network
Pricing – would apply to the whole of the Auckland
network. Instead of fuel excise, motorists would
be charged for every kilometre they drive, with the
charge increasing on congested roads.

Motorists' movements would be recorded through GPS-based tracking devices installed in cars.

The intention would be to significantly reduce

congestion, and do so in a revenue neutral way

– people travelling on busy roads/
at busy times would pay more; people travelling
on quiet roads would pay less; but the overall
revenue generated would be the same or less as
what's generated by fuel excise.

ATAP's focus for the time being is on doing the groundwork – implementation would be at least a decade away.

What our Auckland Members are telling us

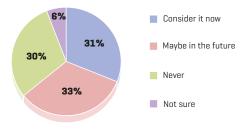
Between March and May this year, we sought feedback from Auckland AA Members on congestion charging, as part of a wider survey on road pricing. We received over 1300 responses, and here's what we learned:

1 Principles of congestion charging resonate...

At a principle level, Auckland AA Members support the idea of congestion charging, and recognise the logic behind priced and non-priced demand management tools.

Around two-thirds say they're open to congestion charging, either now or in the future.

Should the Government consider charging tolls on congested roads to encourage people to avoid them at busy times?



2 ...as long as benefits visible

But people need to have a clear sense that congestion charging will deliver direct benefits to motorists and value for money.

As soon as respondents perceive congestion charging as just a means to punish people for car use or they get a sense that it will fail to alter the congestion status quo, support dissipates.

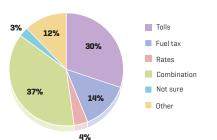
"I object to paying a toll for a road that is essentially a car park."

- AA Member

Paying more to get more

There is a broad willingness to pay (at least a little) more to deliver game-changing transport projects. Tolls, particularly tolls on new infrastructure (which is what Auckland AA Members typically understand "tolls" to mean), remain the most popular funding option.

If Aucklanders had to pay more towards infrastucture projects, how would you rather pay?



4 Tolls on existing roads remain problematic

Yet tolls on existing roads – which would be necessary under any congestion charging scheme – do not sit nearly as well.

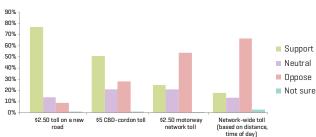
Despite the stated openness to congestion charging, there is widespread discomfort with the idea of paying to use roads people consider they've already paid for.

"Tolling roads that are already built and paid for is theft."

- AA Member

Hence, when Auckland AA Members consider different charging schemes (at face value, at least), support plummets as the coverage of the scheme increases, with a network-wide scheme – along the lines of the ATAP proposal – the least favoured option.

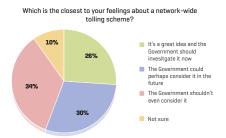
How do you feel about the following tolling schemes?



Once explained, network-wide charging more palatable

However, once the rationale of a network-wide charge – in terms of congestion relief and revenue neutrality – is explained, the support profile changes significantly.

Over a quarter say a network-wide scheme, with fuel excise replaced by a distance-based charge and higher charges for driving on congested roads, should be implemented now, while another 30% say it could be considered in the future.



6 Fairness a major concern

Both solicited and unsolicited, respondents expressed deepseated concerns about the equity impacts of congestion charging.

Around two-thirds of respondents – similar to the proportion expressing in-principle support for congestion charging – said they would be "very concerned" or "somewhat concerned" by the potential for new charges to affect some people disproportionately (on account of where they live, work or travel) and for some to be unable to afford them.

"Toll infrastructure costs money to put in, causes resentment and accentuates a two-tier society."

- AA Member

Others expressed a lack of confidence in the transport planning process, and resented paying more when the money might not be well spent.

"The Government and Council are very good at throwing money at schemes that don't work."

- AA Member

Little scope for switch to PT

Auckland AA Members indicate minimal willingness or ability to switch to public transport (PT), walking or cycling under a congestion charging scheme. Even if faced with a \$5 toll and twice as much congestion as they face now, more than two-thirds say they'd continue driving.

Why? Typically, respondents point out that they need their cars during the day for work or personal activities and/or that no viable PT alternative exists.

"People don't drive around Auckland just for fun, they do it because they have to. Punishing them for that is morally indefensible."

- AA Member

There is a strong belief among Auckland AA Members that any new road user charges must go hand-in-hand with significant improvements in PT.

"It's no good forcing people to use something that isn't effective across the entire city. Don't penalise me when you can't offer a suitable alternative."

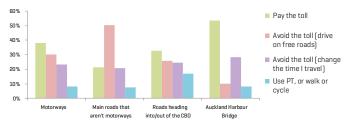
- AA Member

8 Changes to routes/travel times more likely

Behaviour change by drivers is far more likely to occur through altering routes and departure times.

Responding to hypothetical charging scenarios, Auckland AA Members typically say they'd simply pay the toll and continue to drive, though many say they'd avoid the toll by driving on free routes or travelling earlier or later.

How would you respond to a \$2 peak-hour toll on the following roads



9 Would it really work?

Under an area (rather than network-wide) charging scheme, the diversion of traffic onto free roads could help to spread peak demand on the busiest roads. But it could also lead to un-tolled sections of the arterial network being over-loaded.

This possibility is top of mind for Auckland AA Members, leading many to question whether congestion charging would actually work.

"Many people would just avoid these toll roads altogether and create congestion in other areas."

- AA Member

10 Privacy not a deal breaker

In general, respondents were split on their feelings about a third party (whether a government agency or a company) having access to information on where and when they travel, with one-third not at all concerned, one-third a little concerned, and one-third very concerned.

Older respondents tended to be less concerned about loss of privacy, while respondents in general were more comfortable with the Government accessing their private travel information than a commercial provider.

Recommendations

Here are our recommendations for policy-makers, both within and beyond the ATAP process:

Stay the gradual course

Where congestion charging and other road pricing schemes have successfully been implemented around the world, they've typically been preceded by a lengthy public engagement process. The Oregon Department for Transport, for instance, spent 10 years building stakeholder support before trialling a distance-based charging scheme.

When the officials move too far too fast, there's a risk of congestion charging not just being rejected by the public, but becoming politically toxic for the long term.

The incremental programme set out by ATAP is therefore completely appropriate, and must not be compromised.

2 Focus on benefits

Throughout the public engagement process, there must be an unrelenting focus on what congestion charging would mean for motorists in terms of benefits.

Ultimately, securing public support for congestion charging would come down to being able to demonstrate two things: that it will deliver improvements in travel times; and that, society-wide, it will result in no additional costs – and maybe even reduced costs.

If it became apparent that these outcomes couldn't be delivered, it'd be time to re-think the approach.

3 Build understanding through trials

To support ATAP's research programme, we'd like to see a focus on real-world, 'fail-fast' road pricing trials, both to increase public awareness and to learn from the public about how any new scheme would need to be structured to gain support.

One option would be a practical trial of a universal charging system in Auckland, along the lines of a trial recently carried out in Melbourne. This would entail installing tracking devices in the vehicles of a volunteer sample of Auckland road users, and monitoring their behaviour in response to new price incentives.

A trial conversion of a bus lane into an express lane should also be considered. Express lanes are widely used in North America, and entail general traffic paying a toll to access bus/carpooling lanes. The toll rises or falls based on demand, and under a trial could be set high enough to ensure bus movements aren't constrained.



4 Develop existing tools

The journey towards congestion charging should also involve developing existing pricing and demand management tools. In particular, if officials envisage some form of network-wide charging in the future, more emphasis should be put on the fact that New Zealand already has a globally recognised framework for it in the form of RUC/eRUC.

A necessary precursor to network-wide charging would surely be to make a success of this framework, and increase eRUC's penetration of the diesel fleet from a current, paltry 14%.

It'd also make sense to start rolling out in Auckland some of the features of the Wellington Smart Motorway, in particular variable speeds to maximise throughput.

5 Dedicated road pricing unit

Out of the ATAP process, we would like to see a specific unit established to oversee road pricing policy development, to ensure the process maintains momentum and to avoid public sentiment pitfalls.

The unit could be a multi-agency initiative, including personnel with both technical backgrounds and softer skills (strategic communications, in particular).

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Auckland Matters

The AA's Auckland infrastructure issues newsletter

AUGUST 2017 ISSUE 08

ISSUE 8: PARK AND RIDE



GUIDING

JOURNEYS FOR OVER 110 YEARS. New Zealand

From the policy team



"Why doesn't Auckland have more park and ride stations?"

It's a question we're constantly asked by Auckland AA Members,

and it's a reasonable one.

Our Members see park and ride as a practical, convenient service, and an example of an effective public transport (PT) system in action.

Yet parking at bus and train stations

- where it exists at all – is provided in small quantities, and at busy sites all spaces are typically occupied by daybreak.

For many Auckland AA Members, it's another reason not to consider PT, and seems to contradict the pro-PT ethos of the city's transport authorities.

Issue 8 of Auckland Matters examines the park and ride question. It argues that, under its current approach, Auckland Transport (AT) is missing an opportunity to entice a significant chunk of new users onto buses and trains, and to build confidence in PT in general.

Our message is not that park and ride should become the main tool for getting people between home and the bus or train station – cost factors make that impractical. Rather, we're saying that park and ride is one piece of the puzzle, but far more investment is required if it's to perform its proper role.

Barney Irvine

Principal Advisor- Infrastructure

Introduction: "If you can't park, you can't ride"

Auckland AA Members want more park and ride, and by and large they're prepared to pay for it.

That's the key feedback from a recent survey of Auckland AA Members on park and ride facilities.

Our Auckland Members are increasingly looking for flexibility in their daily commute, and they see park and ride as a natural fit – especially when compared with using feeder bus services to get to the station. The system they describe is over-subscribed to the point of locking out potential new users. They see increased investment in park and ride as a no-brainer, and they can't understand why

large-scale facilities aren't being developed already.

The AA is calling on AT to deliver 10,000 new park and ride spaces in the next ten years and, based on AA Member feedback, we believe a daily charge could be introduced on some spaces to help offset the cost. If AT and Auckland Council hope to bring about a tectonic shift in commuting behaviour, this is precisely the sort of investment it needs to consider.

Park and Ride basics:

- * Auckland has around 3,800 park and ride spaces supporting its bus and rail rapid transit network (RTN). The RTN is responsible for 25 million trips a year, and approximately 85,000 people use it each day
- * AT envisages a further 10,000 park and ride spaces by 2046, but the current 2015-18 budget commits to less than 1000 new bays
- * AT's vision is for feeder bus services to carry the bulk of people between home and the RTN. This is a key focus of the New Bus Network currently being rolled out in Auckland
- * For a ground-level parking facility, each park and ride bay costs around \$15,000 to build; for multi-story facilities, the cost is closer to \$25,000 per bay



What our Auckland Members are telling us

In February this year, we completed an online survey of Auckland AA Members, to better understand their attitudes towards the park and ride facilities that support the Auckland RTN.

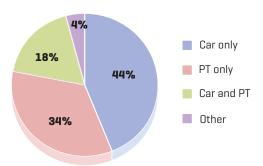
The survey targeted working-age people who commute to the CBD from outside the isthmus, and live in suburbs that could realistically be defined as the catchment area for the RTN. In total, we received just under 1000 responses. Here's what we found:



Car no longer king in the CBD

The travel patterns of Auckland AA Members reflect the growing importance of PT when it comes to commuting to the Auckland CBD. Consistent with figures for the whole of the Auckland population, over half the respondents to our survey report using PT for part or all of their last journey to the central city.

Transport mode used for last trip to the CBD

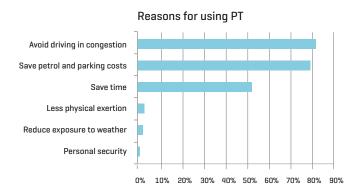




Commuters like to mix and match

Those who drive into the CBD have a number of reasons for doing so: many need their cars for work during the day, others for family or personal commitments before or after work. PT users also make travel choices based on what works for them – they take the bus or train to avoid driving in congestion, to save on costs (petrol and parking), and get to the CBD faster.

But no two days are exactly the same either, and AA Members enjoy and rely on the flexibility of being able to choose: driving, PT, or both.



3

Openness to park and ride

Auckland AA Members are no strangers to park and ride. They know how it works and where it's provided, and the consensus view is that it's a practical, useful service. Even if they don't use it regularly, they have used it: half the respondents say they've used park and ride at least once to attend events like festivals, concerts and sports matches.

"[Park and ride] is a good idea and will help Auckland's transport!"

- AA Member

"I think park and ride is fantastic and if I worked during regular daylight hours I would definitely use it."

- AA Member



Lack of park and ride is turning people away...

Respondents report that parking bays at popular stations are maxed out by 7am, if not earlier. Many make the comment that they – and others – would use the service regularly if more parks were available, and that the current situation is forcing them to drive (and therefore add to congestion) when they would rather not. Of those that rely on the car exclusively to get work, 35% cite a lack of parking at the station as a reason for not switching to PT.

"Park and ride is very good in theory, but if you can't park, you can't ride."

- AA Member

"I would love to use the park and ride (Constellation Drive) every day. However, it is FULL by 6:50am."

- AA Member

5 ...and it's encouraging people to hide and ride

Without park and ride spaces available, many people are parking anywhere they can. Respondents describe a frequently chaotic parking situation around stations – with cars parked on grass verges, over driveways, and blocking exits – and many query why more isn't done to develop un-used land alongside existing park and ride facilities.

"Add more parks to Silverdale park and ride station. With only 100 car parks available when 5000 houses are going into Millwater/Silverdale, there is going to be parking chaos. As it is people already park on grass verges and other peoples' properties."

- AA Member

6 Feeder services not seen as an alternative

Though increasingly open to PT, Auckland AA Members are sceptical about using it to get between home and the bus or train station. Combining multiple PT legs in a journey is a deal-breaker for many – due to inconvenience – while others complain that feeder bus services are too thin on the ground to be a realistic alternative. Of current park and ride users, 18% say there are no feeder services available; 57% say that services exist but not at the required times; and 25% say that services exist but that they prefer not to use them (because of the impact on time and flexibility, in particular).

"Currently too few - if any - feeder buses into hubs. Hopelessly inadequate and patchy."

- AA Member

More park and ride – *now*

Clearer than any other message in the feedback is that Auckland AA Members want more park and ride. Almost 85% believe that Auckland needs to invest more in park and ride facilities, and respondents are at a loss to understand why park and ride is not being developed at scale already.

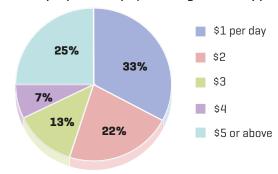
"Park and Ride facilities are absolutely rubbish in Auckland. There should be parking BUILDINGS at all stations (including Smales and Akoranga) that go UP in levels, rather than just concreting hillsides - it's so short-sighted it's just unbelievable. Our bus prices keep going up and yet we don't see any improvement in the services provided."

– AA Member

8 Many are willing to pay for it...

Interestingly, Auckland AA Members don't appear averse to the idea of paying for park and ride. Of those that currently use the service, 67% say they would be prepared to pay \$2 or more per day for a parking space. Of those that identify the lack of parking as a reason for not using PT, 60% would pay \$2 or more to guarantee a park, and 40% would pay \$5 or more.

Maximum rate that current park and ride users would be prepared to pay, if charges were applied



"I would definitely pay for a car park if the combined cost was cheaper than inner city parking."

- AA Member

9 ...but not all

Acceptance of park and ride charges isn't universal, however. A core of respondents remains opposed to the idea, both for reasons of affordability and out of principle. Members of this group often argue that introducing charges would deter them and others from using PT.

"I don't want to pay for parking at the park and ride and then pay the bus fare."

- AA Member

10 Function over form

When AA Members reflect on the type of park and ride improvements they want to see, the priority is capacity – more parks and more sites – followed by features like safety, security and weather protection. Less functional services, such as coffee carts or cafes, are well down the list.

Recommendations

Here are our recommendations for Auckland Transport:



1 Look beyond feeder services

AT's emphasis on feeder services makes sense, particularly in the central parts of the city, but it can't afford to be myopic. It will take time for feeder services to develop to a standard of frequency and reliability that people find acceptable, and for Aucklanders to adjust to the notion of multiple PT trips - the idea of using PT at all is still confronting to many. Moreover, even when feeder services are better established, there will always be a significant chunk of commuters for whom taking an extra bus trip simply does not work.

All of this underlines the need to provide alternatives to the PT feeder system. Where land is available, this means park and ride; where land isn't available, it means partnerships with owners of parking assets - commercial, community and even residential - in the areas around RTN stations, and concrete steps to facilitate ride-sharing/ carpooling technology and new first and last mile services.

An easy win with the public

When reflecting on the cost pressures around park and ride, AT should also reflect on the cost of **not** committing more to the service.

Park and ride is exceptionally popular with the public, and there is a strong degree of expectation around what can and should be delivered. Increased investment in park and ride therefore represents an ideal opportunity to build public confidence in PT, and to demonstrate that AT is prepared to adjust the system to meet the needs of the user, rather than requiring the user to adjust behaviour to meet the needs of the system. All of this is vital if Auckland drivers are to switch to public transport in large numbers.

Conversely, a failure to adequately invest will reinforce negative perceptions of the PT programme, and transport planning in general, and deter new users.

Go large and get moving

The international experience shows that park and ride is an essential building block in any successful PT system; it also shows that Auckland falls well short when held up against broadly comparable cities. To start to match cities like Portland and Perth (in terms of number of park and ride bays relative to total trips on the RTN), Auckland would need to nearly double the number of spaces immediately. We believe the 10,000 additional parks that AT has signalled for the future need to be delivered far more quickly - in the next 10 years,

not the next 30, with the first 5,000 by 2022. This would be necessary to meet current demand and to keep up with PT growth, and could add in the order of 5,000 new users to the PT network over the next decade (by way of comparison, the City Rail Link is expected to add 10,000 users over the same

The bulk of the new parking bays will be on the periphery of the city, where land is cheaper and there is less scope for feeder bus services, but sites closer to the centre of town should not be overlooked.

Charging seals the deal...

The main barrier to park and ride stems from the \$15,000-\$25,000 per space price tag, and what this means for the marginal cost of using park and ride to add people to the PT network. While it could be argued that the case for park and ride stacks up regardless, it becomes far more compelling when the cost factor is neutralised - unfortunately, that means charging some users for the service.

A daily charge of \$2-\$3 on new parking spaces wouldn't on its own offset capital and operating costs, but it'd make a solid start. What's more, to most people, it's likely to be broadly acceptable, particularly if the alternative was no investment at all.

When provided free of charge, park and ride stacks the system in favour of those who have flexibility in their daily routine (and can arrive at the station early). This locks out many of those who don't have flexibility, and applying charges is one of the only tools available to allow them back in.

5 ...but tread carefully

While the majority may be prepared to accept a \$2-\$3 per day charge, there's likely to be a solid and vocal core of opposition. To pre-empt this, AT should look to the charging regimes in cities like Calgary, Perth, and Vancouver to see what has worked and what hasn't. Charges should only be applied on new parking spaces, for the initial period at least. Differential pricing zones (to ensure availability), reserved monthly parking, and easy payment solutions all need to be part of the mix, and new charges must be accompanied by tangible benefits to the customer in areas like security, lighting and weather-proofing.

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