OPEN CITIES
Service Alliance

Peter Achterstraat AM
NSW Productivity Commissioner
NSW Productivity
VIA EMAIL: ProductivityFeedback@treasury.nsw.gov.au
Friday 18, September 2020

Dear Peter,

Re: Green Paper

Thank you for the opportunity to respond to the NSW Productivity Commission's *Green Paper.*

Open Cities Alliance

Open Cities Alliance is a national peak association for Circular Economy and Next-Generation infrastructure and services. We are working with our industry and government members to open our markets and modernise policy frameworks to enable more sustainable, resilient and affordable utility and mobility solutions and services for communities and businesses. Next-Gen infrastructure and services includes sustainable energy, water, waste and mobility solutions that promote sharing and reuse, such as local integrated water management (IWM), local renewable energy generation and storage, shared mobility, mobility as a service, local integrated waste reuse and recycling, and open access ICT networks, including Internet of Things (IoT).

Open Cities advocates for a transition to a Circular Economy to catalyse highly profitable and job-generative businesses. In 2015, the World Resources Forum Asia Pacific held in Sydney estimated the value of a Circular Economy to Australia could be AU$26 billion per year by 2025.The CSIRO recently estimated a 5 percent improvement in material efficiency from a shift to a circular economy could represent a $24 billion increase to Australia's economy.[1]

We also advocate for the establishment of Prosumer frameworks. Australia is leading the rapid emergence of the prosumer: turning the traditional consumer of utilities and services into a producer as well. Enabled by digital technologies and innovation, the rise of the prosumer highlights an exciting trend that is fundamentally altering the structure of our energy, mobility, water, waste and data markets. Yet there are currently no frameworks supporting prosumers. Open Cities exists to work with Government and industry to drive these critical productivity reforms.

Restoring NSW Productivity

Open Cities welcomes the Productivity Commission's efforts to restore the state's productivity levels in the aftermath of the global COVID-19 pandemic. Businesses and communities across NSW have demonstrated their ability to be flexible and adapt quickly to the changing circumstances that the COVID-19 crisis has brought. To foster this increased adaptability, Open Cities want to see the

---

[1] https://publications.csiro.au/rpr/download?pid=csiro:EP195506&dsid=DS4

right infrastructure and services on the ground to foster economic renewal and give families, businesses and communities services that will provide for future generations in a climate-changed, carbon constrained, post-COVID-19 Australia.

We believe NSW already has much of the infrastructure and service innovations to deliver Circular Economy gains. As the Green Paper has highlighted, this infrastructure cannot scale-up due to outdated policy, legislation, regulation and tariff structures that do not promote sharing and reuse. They fail to value externalities such as preserving drinking water through recycling, reusing waste, reducing vehicle emissions through shared mobility and Personal Mobility Devices (PMD) or drones. We welcome the work that the Productivity Commission has conducted to identify these barriers and the suite of recommendations in this Green Paper. Transitioning to 21st-century energy, mobility, waste and water businesses and services is now urgent, and competition is essential to facilitate innovation and the efficient, sustainable, and productive delivery of all products and services, and we commend the recommendations the Commission has put forward to solve many of these problems.

Water, Energy and Utilities Reform:

The Circular Economy is the pathway to transition Australia's aging utility and mobility sectors to a sustainable future. The economic opportunity of the circular economy is significant. Circular utility and mobility businesses and solutions are driving the new circular economy in Europe, Japan, Canada and China. It is driving critical efficiencies that we're just not seeing in our existing siloed utility and mobility markets. Circular Economy is importantly enabling economies to tackle outrageous waste: for example, Sydney flushes out to sea enough wastewater to fill the harbour 1.8 times every single year. That's 1000 Olympic swimming pools of water every day we could be using for: environmental flows; greening to improve air quality and property value, enhanced liveability, and to mitigate heat island effect; and drought proofing communities. Circular Economy infrastructure can also enable Australia to capture the $20 billion dollars in food waste thrown away every year. Open Cities welcomes the Commission's work in this area, and recognises these recommendations as starting the work to bring NSW utilities into the 21st Century.

Planning for and investing in Next-Gen infrastructure that integrates with centralised networks will create new solutions to today's challenges. Next-Gen infrastructure solutions are already anticipating and adapting to change, managing risk, and delivering services that meet the future needs of people and businesses. They are unlocking future growth and development while improving the quality of life and productivity beyond the status quo. However, these benefits need to be scaled across NSW to ensure communities are future-proofed and that solutions keep pace with community aspirations and demands. The lack of competition and the resulting decline in innovation, is impacting negatively on the health, productivity and efficiency of our communities who would be better served with more efficient management solutions at the household and precinct-scale. Open Cities is calling on governments to fully leverage the potential of Next-Gen utilities/mobility and services through the development of State Infrastructure Plans. Also, understanding the real lifecycle costs and values of infrastructure and services in NSW is critical to measuring the productivity of Next-Gen infrastructure.

The efficiency and the effectiveness of Australia's utility and mobility infrastructure will be critical to the productivity and resilience of our communities and the natural environment. It will also be critical to the liveability of our cities, and the productivity of our national economy.

Specifically Open Cities welcomes and supports the following recommendations:

1. 5.1-5.3: Improve governance by setting a vision and a plan for the sector, clarifying roles and responsibilities, and improving collaboration and cooperation.
   - in particular this focus needs to include a commitment to harmonisation and interoperability across currently siloed industries and sectors, and government agencies. In addition to incorporating solutions that include Next-Gen infrastructure to future proof the water sector in NSW.
2. 5.4-5.5: Remove unjustified barriers to water recycling to 'keep all options on the table' for safe, affordable and reliable water services.
3. 5.6: Improve the way regional utilities are funded, to target those that need it most and encourage efficient operation.
   - it is integral that regional and remote communities are given the opportunity to be part of any solution for reforming the way water, in particular, is managed in their communities. Currently water management practices are linear and based on 19th Century techniques, that have enabled the large scale theft of valuable water resources at a time when they are most needed for the functioning of water systems in NSW, and the communities who rely on them. This has disproportionately negatively affected rural and remote communities.
4. 5.7-5.8: Ensure the way we manage water demand maximises benefits for the community
   - It needs to be in a way that recognises the integral needs of the river systems and natural hydrological boundaries of the sources of potable water for communities as a priority not an afterthought. Reviewing the BASIX is also integral for ensuring that new dwellings are energy efficient in practice and not just on paper, and actively encourage passive solar design as opposed to skewing designs towards those that have mechanical heating and cooling as they rate higher.
5. 5.9: Make sure government energy reliability policy is consistent with consumer willingness to pay.
   - Current planning and infrastructure policy, and market settings support a centralised, last-century approach. Transitioning to 21st-century energy, mobility, waste and water businesses and services is now urgent. Competition is essential to facilitate innovation and the efficient, sustainable, and productive delivery of all products and services. Gold plated last-century centralised infrastructure solutions are duping customers. For example, in NSW people pay an additional $100/year to keep the desalination plant closed. Yet Government is now considering building another – despite the fact local water recycling will: harness the 1,000 Olympic swimming pools of water resource currently flushed away daily in Sydney alone; reduce the cost of augmentation; keep water locally for greening, cooling, and amenity; provide a cheap, reliable, restriction-free water supply for communities. As infrastructure and technology gets smaller and smaller, people will reach for these solutions and bypass the network in the same way they are in energy now, by installing solar and batteries. Open Cities member Hydraloop has a box the size of a small refrigerator that recycles 85 percent of water in the home. Technologies like these are coming and will make it possible for homes to have zero usage bills.

6. 5.10: Adopt an integrated market-orientated climate change and energy policy that is technology-neutral and prices carbon dioxide emissions.
   - this is incredibly important for our carbon constrained future, and integral in the transition away from fossil fuels, despite the Federal government's current rhetoric on natural gas.
7. 5.11: Investigate how technology can improve electricity pricing.
   - smart metres are vital to increase efficiency and better reflect real price signals to customers so that they can make informed usage decisions. Critical downward pressure on household expenses/ housing costs cannot be realised into the future if Government does not enable level playing fields for Next-Gen infrastructure including, recycled water and waste providers, shared mobility providers, competitors to the NBN, micro-grid and embedded network providers, virtual power plants and solar/battery providers.
8. 5.12: Improve energy governance by bringing regulation responsibilities under one roof.
   - this is sorely needed. Australia is leading the rapid emergence of the prosumer: turning the traditional consumer of utilities and services into a producer as well. Prosumers want more control over their infrastructure and services, they want better access to innovations and to plug and play in the networks – whether that be energy with their solar and batteries, or water with recycling systems, or mobility by sharing their mobility and charging electric vehicles. The rise of prosumers has been enabled by digital technologies and innovation. It highlights an exciting trend, that is fundamentally altering the structure of our energy, mobility, water and waste and data markets, products, and services. Despite this, federal policies, infrastructure markets, and consumer frameworks do not reflect prosumer rights in any way. Understandably, people want and are demanding direct participation and control over decisions and services that affect their life and their community. They are exercising their ability to participate in the market and want a fair share and fair pricing for electricity or water they may generate and sell back to a grid. Technological advancements are reducing the size and cost of utility and mobility infrastructure, while services are expanding choice. These fundamental changes in the utility/mobility markets are helping and enabling people to share assets - their cars, houses, solar, water, and skills. It is also leading to the democratisation of infrastructure as households and businesses become micro-utilities. Australian retirees are driving the conversion of rooftop solar, joining two million-plus households around Australia already with solar. The products and services provided by prosumers have perhaps the greatest potential to change the way our communities function: by helping drive economic development, protecting the environment, reducing carbon emissions, and putting downward pressure on pricing. Next-Gen infrastructure is driving new market competition, and with it, new choices for consumers to generate energy and trade it, produce water and sell it, and share mobility instead of owning a car.
9. 5.13: make sure regulation on land uses manages multiple land uses to the benefit of the community
10. 5.14: Streamline energy subsidies.
    - targeted subsidies that encourage energy efficiency and future proof housing is vital for vulnerable and low income communities to have equity of access and affordability of services.
11. 6.1: Plan for greater housing and business activity in areas where there is spare infrastructure capacity.
    - in this post COVID-19 period it will be important for ongoing health and wellbeing, and access to work and leisure opportunities for active transport modes to be a priority. Currently the state of active transport is disproportionately inadequate in suburban areas

and where vulnerable and low income communities live, in addition to being a disconnected patchwork of pathways that fail to meet the needs of average users. In most communities in NSW the car has been allowed to take priority, and this has negatively affected liveability and basic accessibility.

12. 6.2: Improve transparency to create the right incentives for good infrastructure investment
    - especially incorporating world leading sustainable transport planning techniques that prioritise active transport and public transport before the single occupant private vehicle.

13. 6.3: Ensure that agencies' business cases align with Government guidelines, and that funding is given to properly evaluate projects.
    - smaller cost-effective investments should indeed be favoured, especially projects that include an understanding of latent demand for increased road capacity that increasing road space does not solve.

14. 6.4: Investigate new ways of easing road congestion, such as reducing problematic driver behaviours and charging for congestion.
    - congestion charging that reflects real time price signals to users is mandatory in any Next-Gen focused city infrastructure planning considerations. Implementing intelligent transport demand management technologies are vital in building a transport network that is future proofed, and needs to be done in conjunction with upgrades to good quality public transport provision.

15. 6.5: Assess how Opal fares and concessions can be used more effectively to ease demand in peak times, encourage greater use at other times, and support those that need it the most.
    - as above.

16. 7.1: Ensure planning instruments to keep up with housing needs, while taking into account community interests.

17. 7.2: Review apartment design and car parking regulations to accommodate consumer choice while maintaining minimum basic quality.
    - More and more people are not buying cars, choosing instead to share their mobility. Young people, people living close to public transport can now use a car share service for about $2,000 a year, versus the $8,000 alone spent maintaining and operating a vehicle (petrol, registration, maintenance).

18. 7.3-7.5: Rationalise zones and restrictions on permissible business activities and produce strategies to use commercial and industrial land more productively.

19. 7.6: Continue to cut red tape to make the planning system more effective and deliver on the Government's goal of reducing assessment times.

20. 7.7: Develop a consistent way to measure the benefits of open and green space, and incorporate it into land use planning.

21. 7.8: Use the Review of Infrastructure Contributions to find ways to deliver a principles-based, transparent and certain system.

22. 8.1: Replace inefficient taxes with more efficient ones. Start by replacing stamp duty with a broad-based land tax on unimproved land values.

23. 8.2: Evaluate reforms within three years and if reforms do not provide sufficient funds to deliver services, council should hold a plebiscite of ratepayers to test support for abolishing the rate peg.

Open Cities would like to work with the NSW Productivity Commission on achieving the following outcomes:

DRIVING PRODUCTIVITY

1. **Make Australia/NSW a circular economy world leader by 2030 with a dedicated national strategy.**

2. **Establish a dedicated unit in the NSW Treasury to provide research and leadership on Australia's transition to a Circular Economy to drive productivity and create jobs.**

3. **Infrastructure NSW consider opportunities to fully leverage the potential of Next-Gen utilities/ mobility and services through the development of the Australian Infrastructure Plan and in response to those opportunities and challenges identified in the Infrastructure Audit.**

4. **Appoint a Prosumer Commissioner to champion prosumer rights across NSW Government and implement a prosumer framework for individuals and businesses.**

5. **Resource the NSW Productivity Commission to investigate the productivity opportunities from the implementation of a circular economy with a focus on Next-Gen infrastructure and services.**

REDUCING COSTS, INCREASING RELIABILITY AND BUILDING RESILIENCE

6. **Commit to staged targets that support zero emissions in energy, water, waste, and transport sectors to provide certainty to business and drive innovation.**

7. **Establish a Heat Island Mitigation Unit in the Department of Prime Minister and Cabinet to develop and implement a Cool Communities Strategy to work across government to help reduce temperatures in classrooms, buildings, and communities.**

REALISING THE BENEFITS OF NEXT-GEN INFRASTRUCTURE AND SERVICES

8. **Leverage investment in infrastructure and through City Deals to incentivise the delivery of next-generation utilities and services.**

9. **Expand the scope of the State transport plan to include shared mobility, integrated mobility including electric vehicles (EVs), autonomous vehicles (AVs) and energy demand modelling.**

Conclusion

Open Cities welcomes the The Commission's recognition that for NSW to thrive in this new era of COVID-19 financial pecuniary, most existing planning and regulatory frameworks need to change and stop preferencing standard monopolistic centralised services, with outdated and unfit for purpose regulation environments that aren't interoperable or harmonised across jurisdictions. The COVID-19 pandemic has highlighted that all states and territories need to be self-reliant as much as possible, and NSW needs a new utility model that is localised and sustainable. This model would democratise infrastructure ownership to enable citizens and businesses to reap the financial

benefits and actively participate, with collective ownership and responsibility. Citizens want a more significant say in their utility and mobility future.

Investment in alternative, more innovative solutions is limited. Siloed institutional arrangements fail to allocate responsibility for broader investment outcomes and also reflect an institutional aversion to risk. For markets to respond to new technologies and opportunities in areas such as recycled water and waste, renewable energy generation, sustainable supply, open data networks, and shared mobility solutions - action is required. Removing outdated regulatory barriers will create a level playing field and support the procurement and delivery of Next-Gen infrastructure and services, and we welcome The Commission's recommendations to achieve this.

NSW families, businesses and communities are already experiencing the impacts of the climate and biodiversity crisis across the country, with declining liveability, including:

- Water scarcity, extreme heat, fires, air pollution, biodiversity loss, the collapse of fish stocks
- Heat island effect – rising temperatures and associated negative health impacts
- NSW share of Australia's 67 million tonnes of general waste produced annually of which only half is recycled and the 7.3 million tonnes of food waste thrown away annually

Issues that the recent COVID-19 pandemic has only served to exacerbate, and has thereby resulted in the drastically decreased productivity and consumer sentiment in NSW and across Australia.
Open Cities is excited to work with the NSW Productivity Commission in setting the right course for productivity priorities and ensuring the solutions that are delivered over the next five years will be world leading. We are available, and would welcome the opportunity, to meet with the NSW Productivity Commission to discuss this submission.

Yours sincerely,