

# Powering Sydney's Future

## Frequently Asked Questions

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December 2017

### Project background

#### Q: Why is this project needed?

A: Inner Sydney is one of the most critical parts of the NSW electricity network. However, parts of the electricity network that currently supply Inner Sydney are ageing, with many of the assets built decades ago.

The key drivers for this project are:

- The **planned retirement of a number of Ausgrid's cables** that are in poor condition
- The **deteriorating condition and reduced capacity of ageing cables in the existing network**
- An **upturn in peak electricity demand** since 2014, driven by renewed economic activity including major transport infrastructure projects such as the Sydney Light Rail, Westconnex, and Sydney Metro

A solution needs to be in place by the early 2020s to address these issues and TransGrid, together with Ausgrid, has been planning a solution.

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#### Q: What is the proposed solution?

A: TransGrid's plans include a network and a non-network solution. The non-network component, which involves a mix of local generation, storage and demand response initiatives, has enabled TransGrid to delay the need for the proposed network solution. However network changes are still required to ensure that Inner Sydney continues to enjoy reliable electricity into the future.

The proposed network solution is the installation of a 330kV underground circuit (three cables in total), with the infrastructure to enable installation of a second 330kV circuit (a further three cables) in the future if required. The first circuit would be completed and commissioned in 2022/23. The network solution runs from TransGrid's Rookwood Road Substation at Potts Hill, to TransGrid's Beaconsfield West Substation at Alexandria. The project would connect to an existing TransGrid tunnel from St Peters to our Haymarket substation.

In May 2017, after extensive stakeholder engagement we announced a preferred

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route that utilises the existing road network between the two substations. The preferred route and the route selection report can be found at [www.transgrid.com.au/psf](http://www.transgrid.com.au/psf)

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**Q: Why is TransGrid continuing with planning for this project when the AER does not agree with the proposed timing?**

TransGrid submitted a revenue proposal for the regulatory period of 2018/19-22/23 in January 2017. The AER has recently published its draft decision on this proposal accepting the majority of TransGrid's recommendations.

In this draft decision the AER did not reject the need for the project but disagreed with the proposed timing, and noted significant uncertainty in regard to future electricity demand in inner Sydney.

Following extensive engagement with stakeholders and consumers about the project, including its cost and impact, TransGrid has responded to the issues raised by the AER by proposing a staged delivery solution. The AER's final determination is expected mid-2018. We will continue to work with the AER to ensure a safe and reliable power supply for the 2018/19-22/23 and beyond.

## Benefits

**Q: What is the benefit of this project/why is it required?**

A: Inner Sydney is one of the most critical parts of the NSW electricity network supplying more than 500,000 customers. It powers homes, businesses, tourism, transport systems and participation in global markets.

This project will ensure TransGrid is able to meet the NSW Government's reliability requirements and continue to deliver a reliable electricity supply to the Inner Sydney area for the next decade and beyond.

## Route Selection

**Q: How was the preferred route for a cable solution selected?**

A: More than 30 potential route options were examined and the area between TransGrid's substations at Rookwood Road and Beaconsfield West was identified as the optimal area for the new underground cable route. This was based on detailed assessment of community and environmental impact and cost.

This preferred route was developed in consultation with local stakeholders. The summary of this report can be downloaded from the website

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**Q: Have you looked at co-locating with existing infrastructure in other areas? If so, where?**

A: In preparing this preferred route, we reviewed opportunities for co-location with councils and other government bodies. This included investigating the option to install cables as part of the WestConnex project in Alexandria. The project team is continuing to seek opportunities to work with others to minimise impacts on the surrounding community.

**Q: Why hasn't TransGrid co-located these cables within the corridor of existing TransGrid cables?**

Based on the location of both substations a new cable route was identified as the most viable solution. Locating TransGrid cables in the same area presents a significant risk to the network if there is an interruption to the supply in that area for any reason. There are also technical issues if cables are placed close to each other. The preferred route maintains security of supply across the network and increases network reliability.

**Q: Why didn't you consult on the wider study area from Rookwood Road to Beaconsfield West?**

A: TransGrid plans to install cables with the least disruption to the community. This means pursuing the most direct route where feasible to reduce time, cost and impact on housing and businesses it passes. Other considerations include the need to avoid existing services in the road, ground conditions, environmental and community considerations. The route selection report contains detailed information on this process and is available on the project website [www.transgrid.com.au/psf](http://www.transgrid.com.au/psf)

**Q: When will this route be confirmed?**

A: We are currently in the planning stage for the project and now have a preferred cable route. The next step is to finalise an Environmental Impact Statement (EIS) for this route. There will be an opportunity to provide further feedback via a submission when the EIS is placed on public display. A determination on the project is expected in mid-2019. TransGrid has also completed a Regulatory Investment Test for Transmission (RIT-T), as required by the Australian Energy Regulatory (AER). The documents that form the RIT-T can be found at [www.transgrid.com.au/psf](http://www.transgrid.com.au/psf)

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TransGrid will keep the community and our stakeholders during all project stages.

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**Q: How many routes have you considered?**

A: In 2013 and 2014, we identified 31 possible cable routes. These are outlined in our route selection report. Options were narrowed to 13 potential route options between Rookwood Road and Beaconsfield West following further investigation and stakeholder engagement.

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**Q: How have the impacts on the community been considered in the route selection process? How were they weighted compared to cost?**

A: TransGrid considers the environment, community, stakeholder, design, cost and program implications when planning major projects. Community impacts are assessed as a key component of the EIS and are a significant consideration during the approvals process.

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**Q: Will the route affect any private property? If so, how will these property owners be compensated?**

A: TransGrid always attempts to minimise impacts on private property as far as possible. Where there are impacts, the project team liaises directly with the property owner regarding their individual situation.

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**Q: Will roads, footpaths or green spaces impacted by construction be returned to a suitable standard?**

After construction, any impacted surfaces such as a roads, footpaths, median strips or green space will be reinstated.

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**Q: What are the next steps?**

A: Now that we have a preferred cable route, TransGrid is progressing the design of the cable route and starting an environmental assessment of the project. There will be another opportunity to give feedback on the proposal in detail as part of this process. We will keep you updated throughout the project and community feedback is welcome at any time.

## Electric and Magnetic Fields

**Q: How will TransGrid minimise the risk of Electric and Magnetic Fields (EMF)?**

TransGrid's core role is to provide safe, reliable and efficient transmission services

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across TransGrid's network.

EMF modelling will be undertaken as part of the detailed design and Environmental Impact Statement (EIS) phase for this project.

TransGrid also conducts EMF monitoring around our infrastructure to ensure levels are well below recommended limits.

More information about Electric and Magnetic Fields can be found on the website at: <https://www.transgrid.com.au/public-safety/emf>

## Construction

### **Q: How big would the construction site be for a trench installation and how long would it be open for?**

A: The size of the trench would be approximately 3 metres wide by 1.5 metres deep. The construction would be completed for most of the cable route in approximately 100 metre sections, and there is likely to be more than one construction site underway at a time.

Each work section would be occupied for approximately two weeks at a time. It is possible for this to vary depending on proposed construction methodology and constraints in the area such as ground conditions and existing services.

Traffic management plans would be prepared in advance to minimise impacts on residents and businesses. Community feedback will be considered as part of this process. Access will be maintained except when we are trenching directly in front of a property. However, steel plates can be placed over excavations at any time if required, and will be used to provide property access when we are not working. TransGrid will actively engage with residents and businesses during construction to minimise any disruption to property access.

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### **Q: Do the cables need to be underground?**

A: Generally the community expectation in urban areas is to install new powerlines underground. Existing infrastructure and built up areas also mean that overhead powerlines may not be feasible in these areas. The proposed cable route will largely be in urban Sydney areas.

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### **Q: How deep in the ground will the cables be buried?**

A: The cables would be dug in a trench, and would normally be 0.9 –1.2m deep to the top of the cables. However, this will vary depending on the type of surface and

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interfaces with other underground services. There will also need to be special provisions made at some locations with unique conditions, for example at any rail or water crossings.

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**Q: The existing roads along the preferred route are already busy and congested. How will TransGrid reduce the impact on motorists?**

Construction will be managed in accordance with traffic management plans endorsed by relevant authorities. The traffic management plans will be reviewed or approved by the relevant road authority before construction.

TransGrid will work with relevant stakeholders during the planning stage on our construction approach to minimise the impact on traffic. This may include working at night, working during school holidays and staging work to reduce construction area.

Consultation will be undertaken with surrounding community in advance of construction and TransGrid will work to minimise construction impacts.

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**Q: Will there be night works?**

A: Generally, on busy roads, the relevant road authority directs work to be completed out of hours. TransGrid will consult with the community along any sections where night work may be required in advance to mitigate impacts as much as possible. The project's environmental assessment will also outline mitigation measures required to reduce impacts of any night works.

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**Q: How many cables will be installed?**

Initially one circuit will be installed, with three cables for most of the route. Conduits and other infrastructure will also be installed to allow for the feeding of a second circuit (a further three cables) at some time in the future, if required. This means we would not have to come back and dig up the entire route to lay cables in the future.

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**Q: What level of disruption can be expected during construction?**

A: This information will be publicly available as part of the Environmental Impact Statement (EIS). There will be general construction impacts from excavation in the roadways which we will work to minimise.

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**Q: Will there be an interruption to supply during construction?**

There is no planned interruption to electricity supply due to construction.

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**Q: Will residents and businesses be compensated for disruption? (for example, loss of access to driveways)**

A: TransGrid works to mitigate impacts as much as possible through community engagement and extensive planning. As most of the work will take place on public road, TransGrid would not provide compensation. If there is any requirement to utilise private property, then the project team would liaise directly with the landowner.

## Contact Us

**Q: Where can I go to get more information?**

A: For more information about Powering Sydney's Future please contact us at:

**Toll-free phone number:** 1800 222 537

**Email:** [psf@transgrid.com.au](mailto:psf@transgrid.com.au)

**Post:** PO Box A1000, Sydney South, NSW, 1235.