

Tuesday, 15 March 2016

The Manager  
Company Announcements  
Australian Stock Exchange Limited  
20 Bridge Street  
SYDNEY NSW 2000

Dear Sir / Madam,

**2016 SECURITYHOLDER NEWSLETTER**

I enclose the Spark Infrastructure newsletter sent to securityholders today together with their 2105 Full Year distribution statements.

Yours faithfully,



**Alexandra Finley**  
**Company Secretary**

## **CHAIRMAN'S MESSAGE**



BRIAN SCULLIN

Dear Securityholder,

The primary focus for your Directors of Spark Infrastructure is the delivery of steadily growing distributions over time and across regulatory periods. We are acutely aware of the importance of this to our investors and this understanding forms the backdrop for our decision-making on every matter that we consider.

With this in mind, we were delighted to have been successful in acquiring a 15.01% interest in the NSW electricity transmission business TransGrid in December of last year. The acquisition has diversified the investment portfolio of Spark Infrastructure, and specifically the sources of its cashflows and has strengthened our ability to continue to grow distributions over the long term. TransGrid offers significant opportunities to achieve operational efficiencies and to grow unregulated business revenues; more on this later.

### **Full Year 2015 results**

Spark Infrastructure has delivered another solid full year result for the year ended 31 December 2015. As always, our success depends upon the performance of the businesses in our investment portfolio. SA Power Networks (SAPN) and CitiPower and Powercor, together known as Victoria Power Networks (VPN), in which we hold 49% interests, have performed strongly as they transition into their new 5-year regulatory periods.

Our 15.01% interest in TransGrid reached financial completion only two weeks prior to 31 December 2015 and

so its results have not had a meaningful impact in this reporting period. The acquisition has expanded and diversified our cashflow sources and we are confident it will make a significant contribution to growth in distributions in the future. In addition, the 11% economic interest in DUET Group (DUET), which is now under review, has continued to be accretive to cashflows.

### **Distributions to securityholders**

The performance of our investments has enabled your Directors to declare a 2015 final distribution of 6.0 cents per security (cps), in line with prior guidance, bringing total distributions for 2015 to 12.0cps. This is 4.3% higher than 2014.

In addition, we have made clear our intention to review distributions in the first half of 2016 following the resolution of various regulatory matters which may result in increased operating cashflows to Spark Infrastructure. The first piece of that puzzle has already fallen into place with the publication of the Australian Competition Tribunal's decision in relation to certain appeals lodged by the three NSW electricity distribution businesses (Ausgrid, Endeavour Energy and Essential Energy) on 26 February 2016; into which SAPN and VPN joined. While the outcomes are not yet completely clear, some are likely to have a positive impact on the revenues of SAPN and VPN going forward.

We now await receipt of VPN's Final Determinations currently expected at the end of April 2016 and the finalisation of associated business planning processes. At that point the path will be clear to provide updated distribution guidance.

### **Strong cashflows continue to underpin growth**

Underpinning our distribution growth is the reliable stream of operating cashflows which have been generated by our investment portfolio. In relation to our longest standing investments (i.e. SAPN and VPN) it is very pleasing that they have been able to fund their own substantial growth, reduce their gearing as measured by net debt to RAB,

and pay a growing distribution to their shareholders. In turn, this has enabled Spark Infrastructure to continue to deliver a growing distribution to its securityholders, representing an investment that has an attractive yield plus asset growth.

SAPN and VPN have both recently commenced the first year of their respective new 5 year regulatory periods. Both businesses are currently operating according to the parameters provided in their Preliminary Determinations and will undergo a no disadvantage 'true-up' for years 2-5 of their regulatory periods based on the outcomes in their respective Final Determinations. Our new investment, TransGrid, is currently subject to a 4-year regulatory period, for this regulatory cycle only, which expires in June 2018 and hence will commence its regulatory reset process in 2016.

SAPN and VPN have now achieved the previously stated gearing target of 75% net debt to RAB. This now frees them to take a more flexible approach to funding their growth which will likely result in increased cashflows to their shareholders, including Spark Infrastructure.

In addition, both businesses have demonstrated an impressive capacity to manage their cost base. They have been steadfast and innovative in how they have achieved this and their success is clearly evident in their 2015 results. Their operational efficiency has again been confirmed in the most recent Benchmarking Report published by the Australian Energy Regulator (AER); which confirms their top quartile rankings in this area. It is this knowledge and experience that we will bring to our investment in TransGrid, and it is our goal to move that business to the efficient frontier over time.

### **Economic interest in DUET**

Our investment in DUET has made a positive contribution to our cashflow since it was acquired in May 2014. However it is fair to say that their recent acquisition of Energy Developments Limited and our acquisition of an equity

interest in TransGrid have led us to review our continuing economic interest in DUET. This exercise was expected by many of our investors and given ongoing speculation around our intentions we have taken the steps of formally confirming the review. No decision has been made by the Board in relation to the matter and neither has a specific time frame been determined. We will inform the market at the appropriate time.

### Changing of the guard

In November of last year I announced my intended retirement from the Board of Spark Infrastructure to take effect at the 2016 Annual General Meeting (AGM). Dr Doug McTaggart was appointed as Deputy Chair in December 2015 and his election will be considered by securityholders at the AGM in May 2016. If he is successful in being elected, it is the intention of the remaining Directors to appoint Dr McTaggart as Chair of Spark Infrastructure following my departure.

Dr McTaggart was selected through the Board's Nomination and Remuneration Committee, which undertook an extensive search process, as part of the Board's succession and renewal program. Dr McTaggart will bring valuable skills to the Board of Spark Infrastructure along with a deep understanding of infrastructure investments, funds management and significant experience with regulated assets.

I am pleased that I was able to lead Spark Infrastructure during an exciting time involving sector consolidation, technical innovation and regulatory reform. With SAPN and VPN at the start of their new regulatory periods and the transition of TransGrid to private ownership well underway, now is the time to put into practice our commitment to Board renewal for the role of Chair. I know I leave the business in good shape and in safe hands.



**BRIAN SCULLIN**  
Chairman

## MANAGING DIRECTOR AND CHIEF EXECUTIVE OFFICER'S REPORT



RICK FRANCIS

Dear Securityholder,

Spark Infrastructure's core priority for securityholders is to continue to deliver sustainable, growing distributions over time and across regulatory periods. This is driven by active management of the investment portfolio through working with our fellow shareholders on improving the existing business' operating performance, their financial and capital management and innovation, while also taking a prudent, measured approach to growth opportunities in Spark Infrastructure's overall investment portfolio.

This approach has provided the platform for sustainable growth by Spark Infrastructure over an extended time frame and will continue to be the approach that Spark Infrastructure takes in the future.

2015 was an active and transformational year for Spark Infrastructure that positions us for sustainable growth into the future. This is evidenced through excellent management of costs and innovative responses to technology in the investment portfolio; and the development of a broader investment footprint and more diverse sources of cashflow for Spark Infrastructure.

### Strong financial results in 2015

Over the past year we have built on our track record of reliable, predictable performance. For the year to 31 December 2015, Spark Infrastructure delivered an underlying profit (before Loan Note interest and tax) of \$262.8 million, which was slightly down on the 2014 calendar year.

This result was largely due to a lower equity accounted share of profits from SA Power Networks which, in accordance with the Australian Energy Regulator's (AER) reset schedule, has been operating under the revenue allowance provided in its Preliminary Determination since 1 July 2015.

This is significantly lower than what has been provided in the AER's Final Determination, which was received in October 2015. While the deficit from this period will be recovered from 1 July 2016, under a 'no disadvantage true up' mechanism, it will produce some volatility in the reported financial results. We endeavour to look through this 'timing noise' in setting the distribution strategy going forward.

In 2015, Spark Infrastructure generated standalone operating cashflows of \$207.4 million. Underlying net profit after tax was down 6.6% to \$119.7 million and statutory net profit after tax of \$88.0 million was recorded.

The aggregated net debt to RAB for SA Power Networks (SAPN) and Victoria Power Networks (VPN) was 73.0%. This means that SAPN and VPN have reached the previously stated target of 75% net debt to RAB and are now free to pursue a more flexible funding strategy for growth capital expenditure in the future. This forms an important part of the Directors' confidence in relation to the potential for future growth in distributions to securityholders. The Directors have flagged a review of distribution guidance in the first half of 2016 following the expected receipt of VPN's Final Determination, regulatory appeal outcomes and finalisation of business planning processes.

In relation to 2015, the Directors declared a final distribution of 6.0 cents per security, which will be paid on 15 March 2016. This takes the full year distribution to 12.0 cents per security. The full year distribution increased by 4.3% on the distributions paid in 2014.

## Successful investment in TransGrid adds valuable diversification benefits to the investment portfolio

A major achievement for Spark Infrastructure in 2015 was the successful acquisition by the NSW Electricity Networks consortium of the first of NSW's electricity transmission and distribution assets to be privatised, the electricity transmission business TransGrid. The consortium, which also included Hastings Funds Management, Tawreed Investments (the infrastructure arm of the Abu Dhabi Investment Authority), Caisse de dépôt et placement du Québec and Wren House (the direct investment arm of the Kuwait Investment Authority) acquired a 99 year lease of the assets of TransGrid for \$10.258 billion.

TransGrid owns, operates and manages the largest high-voltage electricity transmission network in the National Electricity Market (NEM), connecting generators, distributors and major end users in NSW and the ACT, and forms the backbone of the NEM connecting QLD, NSW, VIC and the ACT.

Spark Infrastructure made an equity investment of \$735.3 million in the acquisition, which equates to a 15.01% ownership interest in TransGrid. This expands and diversifies our overall investment portfolio with another high quality investment in a regulated electricity transmission asset.

Importantly, TransGrid increases the diversity of Spark Infrastructure's cashflow sources and is expected to be value accretive over the long term, providing ongoing cash generation growth opportunities. There are also long term opportunities for RAB growth and non-prescribed earnings growth in the infrastructure connections and telecommunications areas.

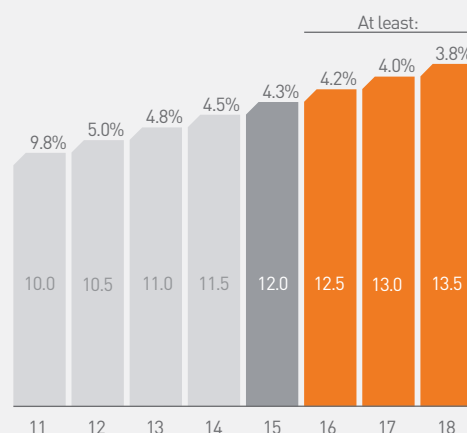
Spark Infrastructure will actively manage its interest in TransGrid to help the business increase efficiency through better asset utilisation and process improvements, with the goal of moving the business to the efficient frontier of performance, much like its investments in SAPN and VPN.

## FY 2015 Financial Results

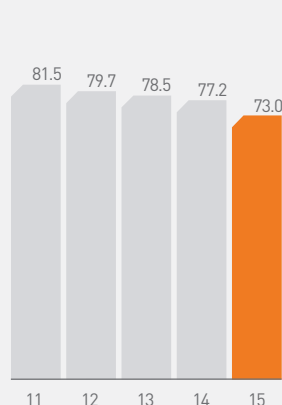
SPARK INFRASTRUCTURE FINANCIAL PERFORMANCE	FY 2015 (\$m)	FY 2014 (\$m)	Variance [%]
Total Underlying income	280.6	288.8	(2.8)
Underlying profit before Loan Note Interest and Tax	262.8	272.1	(3.4)
Underlying Net Profit after Tax	119.7	128.1	(6.6)
Net Profit after Tax (statutory)	88.0	128.1	(31.3)
Operating cashflows (standalone)	207.4	206.9	0.2

## Distribution Track Record + Guidance

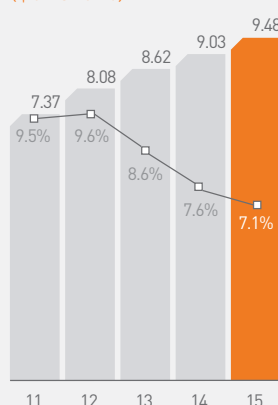
DPS (cps and % growth)



Net Debt to RAB (%) – aggregate SAPN + VPN

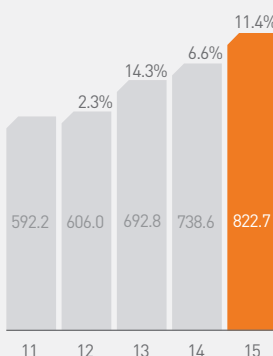


Growth in RAB – aggregate SAPN + VPN Rolling CAGR<sup>1</sup> (\$bn and %)

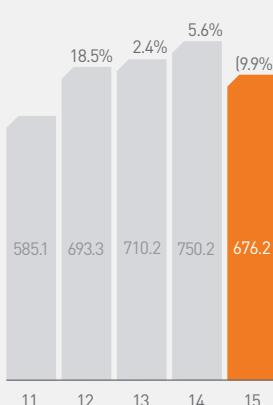


## Spark Infrastructure Track Record

VPN EBITDA (\$M) – (ex customer contributions) (100% basis)



SAPN EBITDA (\$M) – (ex customer contributions) (100% basis)



1. Compound Annual Growth Rate

Since reaching financial close on 16 December 2015, we have established a new corporate structure, put in place an appropriate capital structure, and are well progressed in transitioning the business into private ownership. We have travelled extensively across NSW to visit every TransGrid depot and meet with employees and a number of community representatives.

We have established a new governance framework with policies and procedures necessary for 'business as usual' operations and have appointed a new Board, which includes two Spark Infrastructure Directors from a total of six, including myself as initial Chair, and various Board committees. We have appointed a new CEO of TransGrid, Mr Paul Italiano, formerly CEO of Western Power, who will commence in the role around 1 July 2016. Mr Italiano is a proven transformational leader who will take the business to its next stage of development under private ownership. We have also added depth to the finance team with the appointment of a new Chief Financial Officer from the consortium's bid team.

The business' transformation is well underway, with the consortium business plan being rigorously checked and integrated into the business. The first evidence of this is the roll-out of program "Accelerate" which will accelerate the business towards top quartile performance in asset operations and maintenance, and achieve significant growth in unregulated opportunities in the infrastructure connections and telecommunications areas.

### **Investment portfolio performing well moving into the new regulatory period**

Today, Spark Infrastructure's investment portfolio comprises a 49% interest in each of SAPN and VPN, a 15.01% interest in TransGrid and an 11% economic interest in DUET Group, which is now under review.

VPN performed solidly in 2015, in what was the final year of its 5-year regulatory period. It recorded year-on-year growth in Earnings Before Interest Tax Depreciation and Amortisation (excluding customer contributions and

gifted assets) of 11.4% based on higher regulated revenue and effective cost management through its 'World CLASS' program. VPN generated total revenues (excluding customer contributions) of almost \$1.2 billion, which was up 7.5% on 2014.

SAPN generated total revenues (excluding customer contributions) in 2015 of almost \$1.1 billion, which as noted earlier was down on 2014, largely due to the AER's Preliminary Determination, which came into effect from 1 July 2015.

SAPN and VPN rank amongst the safest, most reliable and most efficient businesses of their kind in Australia. The AER benchmarking report ranked CitiPower No 1, Powercor No 2 and SAPN No 3 in terms of their operating expenditure productivity. The businesses also continue to focus on responding to changes in consumer choice, operating environment and technology through innovation.

For SAPN, a number of innovations took shape in 2015, including the trial of a residential battery storage unit; and the trial of mid-scale network storage to improve reliability and enable increased renewables penetration and defer network upgrades in regional locations. The business also implemented an Advanced Distribution Management System and is engaged in ongoing discussions with customers on the feasibility of renewable micro-grids. Meanwhile, SAPN's "Network Innovation Centre" continues to be a hub for research and community education.

For VPN, innovation is also a major business focus. In 2015, VPN entered into a partnership with NextGen, bringing a proven commercial solar track record and capabilities to the business. The business also commenced a trial for a residential battery storage facility, while a grid scale storage project is also underway. A commercial-scale solar project was rolled out, with 320kW of systems now installed and numerous other service opportunities being analysed.

### **Review of distribution guidance**

Looking ahead, the Directors have confirmed medium term distribution guidance of at least 12.5cps for 2016,

at least 13.0cps for 2017 and at least 13.5cps for 2018. This guidance was first provided at the time of the equity raising in November 2015 associated with the investment in TransGrid and remains subject to business conditions.

The Directors have foreshadowed a review of Spark Infrastructure's distribution guidance during the first half of 2016 which will follow the resolution of various regulatory matters and associated business planning processes and may result in increased operating cashflows at the Spark Infrastructure level.

The Australian Competition Tribunal's recently published decisions in relation to certain appeals lodged by the NSW electricity distribution businesses Ausgrid, Endeavour Energy and Essential Energy have been positive in this regard. Some of the outcomes of those appeals, such as the decision in relation to "Gamma", which is a measure of the value of imputation credits, is likely to have a positive impact on the future cashflows of SAPN and VPN. We now await the Final Determination for VPN, which is due at the end of April 2016, before locking in SAPN's and VPN's business plans in conjunction with our co-shareholders.

Importantly, and what has distinguished Spark Infrastructure for many years now, distributions will continue to be fully covered by both stand-alone and look-through cashflows.

On the operational front, efficiency, safety, reliability, innovation, risk management and engaged employees are key attributes of the businesses that Spark Infrastructure invests in and these things will continue to drive long-term value.

I look forward to keeping you updated on our progress in 2016 and beyond.



### **RICK FRANCIS**

Managing Director and  
Chief Executive Officer



### Spark Infrastructure takes 15.01% equity interest in TransGrid – Entitlement Offer completed

In November 2015, the NSW Electricity Networks consortium, which included Spark Infrastructure, Hastings Funds Management, Tawreed Investments (the infrastructure arm of the Abu Dhabi Investment Authority), Caisse de dépôt et placement du Québec and Wren House (the direct investment arm of the Kuwait Investment Authority), was successful in its bid to acquire a 99 year lease of the assets of TransGrid for \$10.258 billion (plus transaction costs of \$0.140 billion) from the NSW State Government.

TransGrid owns, operates and manages the largest high-voltage electricity transmission network in the National Electricity Market (NEM) by electricity transmitted, connecting generators, distributors and major end users in NSW and the ACT, and forms the backbone of the NEM connecting QLD, NSW, VIC and the ACT.

Spark Infrastructure made a \$735.3 million equity investment to the acquisition, representing a 15.01% ownership interest, which expands its portfolio with another high quality investment in a regulated electricity infrastructure asset.

"We are delighted to have secured this value accretive investment which provides Spark Infrastructure with the opportunity to grow cashflows over the long term. Our rigorous due diligence process has given us a detailed understanding of the asset and its strengths, along with confidence in the expected future drivers of consumer energy demand and asset growth," said Brian Scullin, Chair of Spark Infrastructure.

Spark Infrastructure part funded its equity investment through a 5 for 34 accelerated non-renounceable pro-rata Entitlement Offer at an issue price of \$1.88 per new security. The Entitlement Offer was fully underwritten and was well supported, with the institutional tranche raising approximately \$294 million from the issue of 156.4 million stapled securities. The retail tranche of the Entitlement Offer raised approximately \$111 million from the issue of 59.3 million stapled securities. Both offers had a full entitlement to the FY 2015 final distribution of 6.0cps.

### Brian Scullin, Chair Announces Retirement from Board

Brian Scullin, Chair of the Board of Directors for Spark Infrastructure since 2011 announced his intended retirement from the Board in late 2015. Dr Doug McTaggart has been appointed as Deputy Chair and his appointment will be considered by securityholders at the Annual General Meeting (AGM) in May 2016. Subject to being elected at the AGM, Dr McTaggart will assume the role of Chair from that date.

Dr McTaggart was selected through the Board's Nomination and Remuneration Committee, which undertook a thorough search process as part of the Board's succession and renewal program.

Dr McTaggart is an independent non-executive director. He is Chair of QIMR Berghofer Institute of Medical Research and Suncentral Maroochydore and is on the board of ASX listed Suncorp Group. He also advises governments and is a member of the Prime Minister's Expert Advisory Panel on the Reform of the Federation. Dr McTaggart was CEO of Queensland Investment Corporation (QIC) for 14 years, and was also Professor of Economics and Associate Dean at Bond University.

"Dr McTaggart will bring valuable skills to the Board of Spark Infrastructure along with a deep understanding of infrastructure investments, funds management and significant experience with regulated assets," said Brian Scullin.

"I am pleased that I was able to lead Spark Infrastructure during an exciting time characterised by sector consolidation, technical innovation and regulatory reform. With the reset process for the new 5-year regulatory periods reaching a conclusion, now is the time to put into practice our commitment to Board renewal for the role of Chair. I wholeheartedly support Doug's appointment as an Independent Director and as Chair."



DR DOUG MCTAGGART

### Corporate Debt Facilities Replaced

In November 2015, Spark Infrastructure entered into \$250 million of new bilateral corporate debt facilities, replacing its previous corporate debt facilities. The three and five year facilities (\$225 million and \$25 million respectively) have been entered into with CBA, Westpac and Bank of Tokyo Mitsubishi UFJ. A total of \$205 million of these available facilities were drawn down during December 2015 in order to part fund Spark Infrastructure's investment in TransGrid. This amount remained drawn as at 31 December 2015, and is currently anticipated to be paid down from surplus operating cashflows over the course of the next few years.

## NEWS FROM THE INVESTMENT PORTFOLIO

### VICTORIA POWER NETWORKS (CITIPOWER AND POWERCOR)



TESLA BATTERY AS PART OF VICTORIA POWER NETWORK'S SOLAR AND BATTERY OFFERINGS

#### Melbourne Residents Trialling Battery System

CitiPower is investing \$600,000 in a new trial to install 20 residential batteries to customers' homes in metropolitan Melbourne. The battery system comprises a battery, inverter, solar panels and associated components, and will allow customers to generate and store their own electricity from the solar PV systems.

The three-year trial will shape the future around smart energy technology and allow the company to assess how the batteries perform, how customers use the energy and the benefits of integrating residential batteries into the grid.

"As a responsive energy distributor, our business will do more than simply navigate this new world, we will evolve and lead," said Tim Rourke, CEO of VPN. "As one of Australia's most efficient and reliable networks, we are well positioned to invest in a more intelligent and responsive grid that incorporates innovative technologies and enables customer choice."

#### New Joint Funding Vehicle for Victoria Power Networks and Bank Debt Syndication

VPN established a Common Funding Vehicle (CFV) for CitiPower and Powercor with a combined debt book of approximately \$4.2billion. Victoria Power Networks (Finance) Pty Ltd (VPNF) is now the borrower/issuer of all of CitiPower and Powercor's existing debt and associated derivatives and is a wholly-owned subsidiary of VPN.

The benefit of establishing the CFV is to provide increased scale and borrowing diversity through increased financial flexibility and synergies from a larger aggregated debt book, as well as simplifying the borrowing arrangements and reporting requirements, and providing greater transparency with debt investors and rating agencies.

In February this year, VPNF executed a \$700m Syndicated bank debt facility in tranches of \$250m for three years, \$350m for four years and \$100m for five years. The facility will be used to repay short term bank debt facilities totalling \$685m.

#### GM selected to head CitiPower and Powercor Energy Solutions Team

Last year, CitiPower and Powercor announced the creation of a new senior management position – General Manager Energy Solutions – and the establishment of an "Energy Solutions" team. In December 2015, Glen Thomson was selected to lead the team.

Mr Thomson brings a wealth of experience in the energy sector across generation, retail, renewables and energy services. Previously, he was the Chief Executive Officer of Simply Energy, a national electricity retailer and energy solutions business owned jointly by GDF Suez and Mitsui. His passion for embracing new technologies and opportunities within the industry equips him well to lead the Energy Solutions business. He has a breadth of international energy experience outside the distribution sector, and a deep understanding of the retail market in Australia.

His focus will be on growing the unregulated sector of the business, including commercial solar, storage, windfarm construction and grid-connection services, as well as the transmission and distribution design and construction services currently provided under their National Projects banner. Mr Thomson will also be charged with building the commercial relationship with select partners, enabling CitiPower and Powercor to provide additional energy solutions to customers.



GLEN THOMSON



L-R: DAVID STRATTON (NEWSTEAD 2021 INC), ROS HART (NEWSTEAD 2021 INC), MELISSA O'NEILL (POWERCOR), ELIZABETH CARLISLE (POWERCOR), IAN GILLINGHAM (POWERCOR), GENEVIEVE BARLOW, DON CULVENOR, SADIE GRAY WITH ALISTAIR MCKEOWN(CFO, POWERCOR) AND GEOFF PARK (NEWSTEAD 2021 INC) AT FRONT.

### Renewable Energy for Newstead

In February, Powercor and the Victorian town of Newstead signed a memorandum of understanding that will explore options for Powercor to assist the local community in supplying the town with 100 per cent renewable energy.

Newstead has been exploring options for transitioning to 100 per cent renewable energy and has already undertaken household energy assessments and retrofits, as well as conducting feasibility studies into various renewable energy supply options, including a technical paper on Newstead becoming an energy self-sufficient micro-grid.

The Renewable Newstead project recently received \$200,000 from the Victorian Government to investigate options for local generation and/or retailing that would help the community achieve its energy goal.

### eConnect Live

In December, CitiPower and Powercor launched the first phase of eConnect, a fast and easy online solar pre-approval request system. Through eConnect, customers, registered electrical contractors, licensed electrical workers, non-electricians and solar providers can now submit their solar pre-approval requests directly and receive an instant pre-approval outcome. eConnect will deliver faster and simpler submission and tracking of connections requests, providing a more effective service for customers. Further improvements will be unveiled throughout 2016.

### Final Determination Announced for SA Power Networks

In October, the Australian Energy Regulator (AER) published its final regulatory determination for SAPN for the 2015-2020 period, which came into effect on July 2015. The key components are:

- Operating expenditure allowance of \$1.3 billion
- Capital expenditure allowance of \$1.9 billion
- Total revenue allowance of \$4.0 billion

SAPN will continue to operate under the terms of the AER's Preliminary Determination until 30 June 2016, and a 'no-disadvantage' adjustment made and any under-recovery of revenue made up in years 2 to 5 of the new regulatory period. Consumers should see an average saving of around 5% over the five years.

### Tariff Structure Changes

A new program called the "Power of Choice" is being spearheaded by the Australian and State Governments to ensure the electricity market is robust for the future. The reforms will include changes to network pricing, and new regulation around metering, embedded generation and storage.

In line with this, SAPN needs to better signal, via demand-based tariffs, the cost of building and maintaining a network to meet these infrequent peaks in demand to the network. The company has discussed the issue with stakeholders and customers, and will continue to allow them to shape the changes.

The transition to tariffs based on peak demand will be progressively rolled out over the coming decade, with initial changes proposed to commence in July 2017 to a small number of customers, and the aim of completing reforms by 2025.

### Battery Storage Trials

By the end of last year, SAPN had over 184,000 customers with around 700MW of residential solar PV capacity connected to the network. To understand the impacts this new technology will have on energy consumption and on the network, SAPN has commenced a number of trials, including a residential battery pilot program.

The aim of this project is to defer planned network expenditure in a constrained part of the network using residential customer sized battery storage technology. SAPN will also test the impacts more broadly on the network and customers. The trial began in Adelaide with 10 residential customers and will later expand to an additional 100 customers.



SA POWER NETWORKS CUSTOMER WITH STORAGE BATTERY.



TransGrid operates and manages the NSW high voltage electricity network for more than 3 million homes and businesses across NSW and the ACT, as well as the customers directly connected to its network. Known for its strong culture in pursuit of innovation, TransGrid is well positioned to shape the future of the grid, and is working on a number of innovative ways to integrate new technologies into the network and opportunities to provide new infrastructure solutions that deliver for its customers, community, and shareholders. To enable its growth strategy, TransGrid diversified its business outside its regulated portfolio and in 2014/15, introduced two new lines of business focused on infrastructure and telecommunications.



TOP: IDEMAND WEB PORTAL.

BOTTOM: MAGELLAN STORAGE BATTERY FOR IDEMAND IN WESTERN SYDNEY.

### TransGrid becomes Sponsor Member of Clean Energy Council

Approximately 70% of TransGrid's new formal connection agreements over the last two years came from renewable generators. In November, TransGrid joined the Clean Energy Council as a Sponsor Member to further support the company's efforts in new energy technologies.

The company has been working with Governments to support renewable energy by providing innovative and cost-effective connections through models such as renewable energy hubs, which share connection costs among multiple participants.

In addition to connecting renewables to the network, TransGrid's efforts in the clean energy industry include research and investment to drive the uptake of electric vehicles, integrating battery storage and growing the market for demand management.

"The grid is going to play an increasingly important role in unlocking the full potential of renewable energy throughout Australia. TransGrid's commitment to this is evident by initiatives, such as its iDemand project, which used batteries, solar panels and energy efficient lighting to dramatically reduce electricity use during periods of peak demand. The project was a finalist for the Clean Energy Council's Innovation Award earlier this year," said Clean Energy Council's Chief Executive Officer, Kane Thornton.

### iDemand

TransGrid has partnered with nine academic and research institutions to enable learning and knowledge sharing, and derive the most value to evaluate the future of the demand management solutions market.

As part of this, TransGrid launched iDemand in November 2014. iDemand is a research driven technological initiative aimed at developing methods for managing peak demand and consists

of a 400 kilowatt-hour battery, solar PV panels that can generate up to 100 kilowatts of solar generation capacity, and energy efficient LED lighting, which supplies energy to the site.

The iDemand system has enough energy capacity to offset the equivalent of 40 households' load at peak times and reduce the site's electrical demand by 50%. TransGrid has also developed an interactive web portal that shows live status updates of the system's energy flow, storage and consumption, and allows for the download of historical data to further assist the research program.

### Feasibility Study about Renewable Energy Hub

TransGrid, with funding from the Australian Renewable Energy Agency and NSW Office of Environment and Heritage, is conducting a feasibility study and preparing a Knowledge Sharing Report into the potential for Renewable Energy Hubs. If proven feasible, the proposed model could provide a more cost-effective, scalable and flexible option for TransGrid customers in Northern NSW and possibly other locations around NSW.

The New England region of NSW has been targeted as a prime candidate for developing the Renewable Energy Hub, as the area holds high quality renewable energy resources, such as wind and solar power. The first of its kind in Australia, it will facilitate the connection of several renewable energy generators to the electricity grid, where capacity would otherwise be constrained. This innovative infrastructure solution addresses the challenges associated with designing, managing and operating an increasingly decentralised electricity supply from renewable sources, and would allow for more secure access to the network, while allowing for connection costs to be shared by various proponents, lowering the cost of electricity for renewable generators.

### SPARK INFRASTRUCTURE

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