SUBMISSION TO
PRODUCTIVITY COMMISSION ON
ELECTRICITY NETWORK REGULATORY FRAMEWORKS

Request for Submissions

This submission is made in response to the Productivity Commission's request for submissions to the above draft report.

BACKGROUND

Sustainable Sydney 2030

In developing its vision for the future, Sustainable Sydney 2030, the City of Sydney spent more than a year consulting its community and a consensus emerged on the way to make Sydney a greener, more global and connected city.

Some 90% of people wanted the City to take urgent action to tackle climate change, so the City made sustainability the overarching theme. A major objective of Sustainable Sydney 2030 is to position Sydney as one of the world's leading green cities in the race to counter climate change. To achieve this, the City has committed to reducing greenhouse gas emissions by 70% by 2030 from 2006 levels.

80% of the city's greenhouse gas emissions come from centralised power generation, primarily burning coal, which is inefficient, unnecessarily polluting, a waste of non-renewable resources and the primary cause of climate change. Key in the City's objective to tackle climate change is to supply 100% of the city's electricity from local generating systems through a combination of energy efficiency and low or zero carbon decentralised energy, principally trigeneration that can be fuelled from natural gas or renewable gases.

The emission reduction targets will be delivered through what Sustainable Sydney 2030 calls "Green Transformers". These are a combination of green infrastructure, primarily trigeneration, but also waste and recycled water infrastructure. When combined with demand reduction, trigeneration will provide 70% and renewable energy will provide 30% of the electricity needs of the city in 2030 and reduce overall greenhouse gas intensity by 63.5%. This will require at least 477MWe of trigeneration and cogeneration to be delivered by 2030. The balance of energy needs will come from waste heat from local electricity generation and renewable thermal energy. The renewable electricity and gas will be sourced from within and in proximity to the City's Local Government Area.

The City's Sustainable Sydney 2030 energy and climate change targets will be delivered by the City's Green Infrastructure Plan.

Green Infrastructure Plan

Developing the Green Infrastructure Plan and putting it into action is happening on two levels – for the city as a whole and by the City of Sydney leading the way and installing local green infrastructure projects in its own operations. The Green Infrastructure Plan comprises:

Decentralised Energy – Trigeneration Master Plan
Decentralised Energy – Renewable Energy Master Plan
Decentralised Energy - Advanced Waste Treatment Master Plan
Decentralised Water Master Plan
Automated Waste Collection Master Plan

The City's integrated approach to a city-wide energy, water and waste infrastructure, for example, enables the trigeneration, recycled water and waste collection to share the same network infrastructure routes and stations. Recycled water could be treated by zero carbon waste heat from trigeneration and renewable gases recovered from waste and used in the city's green infrastructure network.

Centralised Power Generation Efficiency and Grid Losses

More than two thirds of primary energy is lost at remote power stations in the form of waste heat, a natural by-product of thermal electricity power generation, rejected into the atmosphere with further losses in the grid supplying the city's very large and peaky electrical load due to the very large electric air conditioning load.

The poor efficiency of centralised energy has a cost that is now being felt by NSW electricity consumers with huge rises in electricity bills, primarily driven by network charges transporting the electrons from remote centralised energy power stations to end consumers.

Grid Network Charges

The Institute of Sustainable Futures, University of Technology Sydney 'Close to Home: Potential benefits of Decentralised Energy for NSW Electricity Consumers' report[1] established that over 2010-15, electricity network businesses in Australia are spending over $46 billion, more expenditure than the proposed $34 billion National Broadband Network.

In NSW, electricity networks are undertaking capital expenditure of $17.4 billion over the 5 years to 2013/14. This represents $2,400 per person and an 80% increase on the previous 5 year period. Average electricity prices in the Sydney electricity distribution network area are expected to increase by 83% during this period with the proportion of electricity bills that goes to pay network charges to rise from 40% to 60%.

The Institute of Sustainable Futures estimates that the City's plans to supply 70% of the Local Government Area's electricity needs from a 360MWe trigeneration network by 2030 could achieve savings in deferred electricity network costs and avoided costs of new power station capacity to serve the city's growing demand in the order of $1.5 billion by 2030.

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[1] Institute of Sustainable Futures, University of Technology Sydney 'Close to Home: Potential Benefits of Decentralised Energy for NSW Electricity Consumers November 2010'
http://www.isf.uts.edu.au/publications/dunstanlangham2010closetohome.pdf

This work is currently being updated by the Institute of Sustainable Futures but will not be completed by the time of this submission. However, the City will send a copy to the Productivity Commission when it is completed.

Renewable Energy Master Plan

The Renewable Energy Master Plan will set out the renewable electricity, renewable thermal energy and renewable gas resources and locations both inside and outside the LGA. A proximity principle of 250km from the city has been applied for renewables outside the city to avoid investment in remote renewables and minimise associated increases in network charges to consumers.

The Arup report shows that 55% of the 30% renewable electricity target can be delivered within the LGA and 45% from outside the LGA. In addition, 100% of the renewable gases/fuels and renewable thermal energy needed to displace natural gas for the 360MWe of trigeneration in the Trigeneration Master Plan can be sourced from feedstocks and resources within 250km of the city.

Together, this would deliver reductions in greenhouse gas emissions of 2.15 million tonnes a year which equates to a 31.5% reduction in overall greenhouse gas emissions from the 2006 base year and potentially up to 100% of the city's local energy target (70% renewable fuelled trigeneration plus 30% renewable electricity) being met from renewable energy.

The final Renewable Energy Master Plan is currently being reviewed and will be published in early 2013.

Leading by Example

Leading by example is an important principle for the public sector as you cannot expect others to do what you are not prepared to do yourself. The "show by doing" principle as adopted in Woking and London demonstrates that if the public sector leads, others will follow.

The City has already reduced greenhouse gas emissions in its buildings by 18% from 2009 to 2011 by building energy efficiency retrofits and has let a further building energy and water efficiency retrofit contract to reduce emissions by a further 24%, increasing the total emission reductions to 42% by the end of 2012. The City has also let a contract to replace all City owned street lighting with LEDs over the next 3 years which will reduce emissions in City owned street lighting by 51%.

A contract has also been let for 1.25MWp of precinct scale solar photovoltaics to be installed on more than 30 of the City's buildings over the next 2 years. The City has taken advantage of its large unshaded collective roof areas, including large roof areas such as depots where there is little on site electricity consumption but the surplus solar electricity can be exported to other City buildings utilising the local distribution network and the trigeneration service provider's 'CogentPower' which retains the retail value of electricity, less distribution use of system charges. This technical and financial approach has reduced the cost of carbon abatement by 50%.

The City's four major energy and climate change projects for its own buildings and operations were all procured via output performance specifications to enable the rapid implementation of large scale reductions in greenhouse gas emissions. These 'show by doing' projects, together with the City's city-wide Trigeneration project will set the City on the path towards reducing emissions on the City's own buildings and operations by 70% by 2030.

City's Trigeneration Project

Following completion of the 2 year long procurement process Cogent Energy (owned by Origin Energy) was appointed by the City as the Energy Services Provider to design, finance, build, operate and maintain the city-wide trigeneration network. Heads of agreement were signed in April 2012 and the development agreement was executed in August 2012.

A key feature of the agreement is that the trigeneration energy centres and low carbon electricity and zero carbon thermal energy outputs will be owned and retailed by Cogent Energy and the thermal reticulation network will be owned by the City of Sydney. The energy centre sites will also be leased by the City to Cogent Energy to ensure continuity of supply.

The agreement also provides for the City and Cogent Energy to develop renewable gas resources to replace natural gas within the development agreement timeframe.

ELECTRICITY NETWORK REGULATORY FRAMEWORKS DRAFT REPORT

VOLUME 1

Opportunity for Further Comment

The City made a submission to the Productivity Commission on Potential Improvements to, Regulation of Distribution and Transmission Networks in the NEM on 11 July 2012[2]. The City's submission was made in response to the Productivity Commission's specific questions to the City on it's city-wide trigeneration project. This submission reiterates important points made in the City's previous submission and in particular, on distributed generation, peak demand and demand management and the regulatory and institutional barriers that need to be addressed if their benefits to the electricity networks are to be realised.

VOLUME 2

9. Peak Demand and Demand Management

Air Conditioning Peak Demand

Although residential air conditioning has been cited by network businesses for increasing maximum or peak demand this overlooks the impact of major air conditioning demands in cities such as the Sydney CBD. The peak demand of residential air conditioning may be able to be reduced by peak, shoulder and off peak tariffs, which already exist in NSW, but such tariffs are unlikely to reduce peak demand from air conditioning in CBD buildings where air conditioning and refrigeration are required to run businesses and public facilities which cannot be ameliorated by smart metering or by running air conditioning overnight. A different

[2] City of Sydney Submission to the Productivity Commission on Potential Improvements to, Regulation of Distribution and Transmission Networks in the NEM – 11 July 2012
http://www.pc.gov.au/__data/assets/pdf_file/0007/118834/sub039-electricity.pdf

strategy and incentives are needed to reduce CBD air conditioning peak demands such as implementing trigeneration and switching from electric air conditioning to thermal energy air conditioning.

A key part of the reason for surging electricity prices is the need to build electricity assets for peak power demand, primarily electric air conditioning, for 4 days of the year to meet high demand on hot days. $11 billion of network assets is built to meet demand for just 100 hours a year and as much as 25% of electricity costs result from peak demand, primarily electric air conditioning, which occurs over a period of less than 40 hours a year.

A residential 2kW reverse-cycle air conditioner costs $1,500 a year to operate and yet imposes costs on the electricity network of $7,000 since it adds to peak demand[3]. These network costs are not paid by the consumer operating the air conditioner but by all NSW electricity consumers whether or not they own air conditioners.

These network costs are significantly amplified by a city such as the Sydney CBD. For example, the Trigeneration Master Plan will displace 542MW of electricity peak demand, primarily electric air conditioning, which all NSW electricity consumers are currently paying for. This is equivalent to taking 271,000 - 2kW reverse-cycle air conditioners off from peak electricity demand.

Street and Public Lighting Peak Demand

A further peak demand that is often overlooked is street and public domain lighting because it is perceived as an off peak load during night time operation. However, street and public lighting switches on, depending on the season, during late afternoon/early evening peak load hours. This adds further peak demand to the air conditioning peak demand during these hours.

There are more than 2.2 million street lights in Australia, mostly owned electricity distribution network businesses costing local Councils $125 million a year in electricity costs and a further $100-150 million in maintenance costs. Street lighting generates around 1.5 million tonnes of greenhouse gas emissions from 1,400GWh of electricity consumed annually[4]. This and peak electricity demand could be halved by replacing existing and new street lighting with energy efficient street lighting such as the City's LED street and public domain lighting retrofit project.

For example, Ausgrid owns 12,400 City lights and the City of Sydney owns 8,559 lights. Although the City pays the electricity and maintenance bills for all 21,000 lights it has no control over the Ausgrid owned lights which continue to be old inefficient lights. Of the City owned lights, 6,448 lights are street or public lighting columns and the balance fluorescent bulkhead lighting in subways, etc. The City is currently retrofitting the 6,448 City owned lights with LED luminaires which will reduce electricity consumption and peak demand by 51%. It will also reduce emissions and the City's exposure to the carbon tax for these street lights by 51%.

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[3] Australian Government 'Draft Energy White Paper – Strengthening the Foundations of Australia's Energy Future December 2011 http://ret.gov.au/energy/Documents/ewp/draft-ewp-2011/Draft-EWP.pdf
[4] Equipment Energy Efficiency Program Street Lighting Strategy – July 2011 http://www.energyrating.gov.au/wp-content/uploads/Energy_Rating_Documents/Library/Lighting/Street_Lighting/Draft-streetlight-Strategy.pdf

Retrofitting existing street and public domain lighting with energy efficient lighting such as LED lighting is relatively low hanging fruit with regard to reducing peak demand and electricity distribution network businesses should undertake these retrofits or transfer the street lighting assets to local Councils to enable them to do so.

10. Technologies to Achieve Demand Management

Smart Metering and Smart Grids

Smart metering and smart grids is not just about the existing electricity system. In addition to electricity networks smart grids should also include distributed generation, gas and heat or thermal energy networks to provide a fully integrated smart grid system which will benefit the electricity system in terms of reduced peak demands and other impacts, fuel switching, storage and security of supply, including potentially island generation in times of severe climate or other extreme events such as storm, flooding and bushfires. This will be particularly important for a future non intermittent renewable energy system which can balance, store and utilise electricity, gas and thermal energy networks.

The Danish energy system[5] is one of the world's most energy efficient systems. This is to a high degree due to an extensive expansion of district heating networks that utilises renewable heat and heat from cogeneration and trigeneration which supplies 95% of Denmark's thermal energy market. Denmark's smart grid is able to facilitate a 30% renewable energy system by 2020 and a 100% renewable energy system by 2050 by integrating electricity with district heating and transport systems.

In an energy system using 100% renewable energy, an intelligent power grid with flexible consumption is combined with heat or thermal energy from renewable fuelled cogeneration/trigeneration and other renewable heat systems such as solar thermal and geothermal feeding into the district heating networks. From a smart grid perspective, the district heating networks can be used to balance renewable electricity generation, particularly at times of high wind power generation which can occur occasionally throughout the year and will occur more frequently with a 50% wind energy system.

Such smart grids for renewable energy systems provide an overall non-intermittent energy system which can significantly reduce greenhouse gas emissions and the impact on the electricity infrastructure and therefore, reduce network charges for electricity consumers.

Storage

In Germany renewable gases injected into the gas grid takes advantage of existing gas infrastructure and storage, including LNG, which can supply renewable gas fuelled generation. E.ON, one of the largest energy suppliers in Germany and Europe is currently constructing a power to gas project[6] for generating hydrogen gas via electrolysis and injection into the gas grid to utilise surplus wind power without reconverting the hydrogen gas back into electricity.

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[5] Denmark: A European Smart Grid Hub http://www.stateofgreen.com/Cache/StateOfGreen/46/46014e52-6503-4c9f-8ac8-8eb325de2320.pdf

[6] E.ON Converting Surplus Energy to Hydrogen http://www.eon.com/content/dam/eon-com/Über%20uns/Innovation/Energy%20Storage__PowertoGas.pdf

Australia is also taking the lead with another power to gas project with CSIRO's concentrating solar thermal power facility[7] in Newcastle, NSW. CSIRO's 'power tower' not only generates electricity it also uses concentrated solar energy to convert natural gas into a product that stores solar energy in a chemical form called 'SolarGas'. The resulting gas is a super charged product that contains more power than natural gas and embodies around 25% solar energy and increasing the efficiency of natural gas by the same amount taking advantage of two of Australia's most abundant resources. This technology can also utilise renewable gas injected into the gas grid and for transport.

Renewable heat and renewable gas are forms of non-intermittent renewable energy storage which take advantage of district heating and gas grid networks to store and convert intermittent forms of renewable energy into non-intermittent forms of renewable energy without the losses of electricity storage. It also significantly reduces greenhouse gas emissions and the impact on the electricity infrastructure and therefore, reduces network charges for electricity consumers.

11. Moving to Time-Based Pricing for the Distribution Network

Moving to time-based pricing for the distribution network may solve some of the problems identified in the draft report but there needs to be a more fundamental strategy than this as identified elsewhere in this submission. Many customers cannot change their time of use electricity consumption such as business, industry, schools, hospitals and other essential services and time-based pricing will simply be a vehicle for increased electricity prices for them.

13. Distributed Generation

Regulatory and Institutional Barriers

The draft report identifies the significant benefits to the electricity networks of distributed generation which includes generating and supplying electricity close to demands and fuel switching from electric heating and air conditioning to thermal energy heating and air conditioning via cogeneration and trigeneration. Renewable heat also offers significant benefits in removing electricity heating and cooling loads from the electricity system. However, there are significant regulatory and institutional barriers to the development and realisation of distributed generation which would benefit both the electricity networks and consumers and bring about a low carbon economy.

Although a number of regulatory barriers to distributed generation are currently being addressed by proposed rule changes there are other more major barriers and burdens to distributed generators that still need to be addressed as set out in the City's previous submission to the Productivity Commission on 11 July 2012 and the City's submissions to the Prime Minister's Task Group on Energy Efficiency dated 30 April 2010[8], AER Approach to Retail Exemptions Issues Paper dated 27 July

[7] CSIRO 'Solar Field 1: Our Original Power Tower' http://csirosolarblog.com/2011/08/03/solar-field-1-our-original-power-tower/

[8] City of Sydney Submission to the Prime Minister's Task Force on Energy Efficiency – 30 April 2010 http://www.climatechange.gov.au/government/submissions/pm-task-group/~/media/submissions/pm-taskforce/papers/102-city-of-sydney.ashx

2010[9], NSW Special Commission of Inquiry Electricity Transactions dated 16 June 2011, AER Framework and Approach Paper on Ausgrid, Endeavour Energy and Essential Energy – Regulatory Control Period Commencing 1 July 2014 dated 15 August 2012[10], AEMC Power of Choice dated 11 October 2012[11] and NSW Draft Renewable Energy Action Plan[12] the resolution of which would economically incentivise distributed generation to the benefit of network businesses and consumers.

Cost Reflective Distribution Use of System Charges

Cost reflective distribution use of system charges will also need to be brought in to incentivise and provide fair treatment to distributed generation. The laws of physics dictate that electricity will always flow to the nearest load. In other words the surplus electricity from a trigeneration or renewable energy plant in the host building or site will be exported into the local distribution network and depending on the quantum of export and voltage of connection will supply an adjacent building or group of nearby buildings in a precinct.

Such distributed generation makes very little use of the distribution network and provides significant network benefits to the public electricity infrastructure in terms of avoided and/or deferred capital expenditure and associated use of system charges for all electricity consumers. And yet, full distribution use of system charges are applied to exports from distributed generation into the local distribution network as if the generation was many kilometres away and regardless of the distance travelled by the electrons.

This outdated approach to distribution use of system charging makes precinct scale or exporting distributed generation uneconomic and either deters distributed generation that would otherwise benefit the public electricity infrastructure or causes the distributed generation project to be significantly downsized so that it does not export with the loss of benefit to the public electricity infrastructure and consumers.

In the UK, cost reflective distribution use of system charging was introduced on 1 April 2010 as part of the removal of the regulatory barriers to distributed generation to incentivise the low carbon economy and to reduce the high levels of expenditure on networks that would have otherwise occurred on the ‘business as usual’ scenario.

The Office of Electricity and Gas Markets decision document[13] set out a Common Distribution Charging Methodology (CDCM) for low and high voltages (below 22kV)

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[9] City of Sydney Submission to the Australian Energy Regulator on Approach Retail Exemptions – 27 July 2010 www.**ar**.gov.au/.../item.phtml?...fn...%20**City**%20of%20**Sydney**

[10] City of Sydney Submission to the Australian Energy Regulator on Ausgrid, Endeavour Energy and Essential Energy – Regulatory Control Period Commencing 1 July 2014 – 15 August 2012 http://www.aer.gov.au/sites/default/files/City%20of%20Sydney%20-%20Submission%20on%20Preliminary%20Framework%20and%20Approach%20-%20August%202012_1.pdf

[11] City of Sydney Submission to the AEMC on Power of Choice – Giving Consumers Options in the Way They Use Electricity – 11 October 2012 http://www.aemc.gov.au/Media/docs/City-of-Sydney-f0384423-abe2-4c73-a2b8-907b0c319e7a-0.pdf

[12] City of Sydney Submission to NSW Government on the Draft NSW Renewable Energy Action Plan – 25 October 2012 https://s3.amazonaws.com/media.cityofsydney/2030/documents/NSW-RENEWABLE-ENERGY-ACTION-PLAN-SUBMISSION-Rev-1.pdf

[13] Electricity Distribution of Charges: The Common Distribution Charging Methodology at Lower Voltages – 20 November 2009 http://www.ofgem.gov.uk/Networks/ElecDist/Policy/DistChrgs/Documents1/CDCM%20decision%20doc%20201109%20(2).pdf

for locational charges for CDCM generators, ie, cost reflective charging. A separate decision document is in place for voltages above 22kV.

NABERS Ratings and Commercial Building Disclosure

Other barriers to distributed generation exist that are not directly linked to electricity regulation but impact on the take up of distributed generation and electricity networks.

The National Australian Built Environment Rating System (NABERS) ratings and Commercial Building Disclosure (CBD) conflicts with the proposals in the Productivity Commission's draft report and will prevent or deter distributed generation of sufficient scale to have any benefit for the public electricity infrastructure. NABERS and CBD must be reformed if distributed generation is to provide the significant benefits expected for the public electricity infrastructure and reduced network charges for all electricity consumers.

At a time when there appears to be movement from government and regulators in removing the regulatory barriers to distributed generation it was not expected that a new barrier to distributed generation would be introduced by government in the form of a new NABERS ruling discriminating against precinct scale distributed generation exporting surplus electricity into the local distribution network in favour of non-exporting small scale stand-alone distributed generation in stand-alone buildings. The former will provide significant benefit to the public electricity infrastructure whilst the latter will provide little of no benefit to the public electricity infrastructure.

NABERS is a national rating system that measures the environmental performance of Australian buildings, tenancies and homes. NABERS measures the energy efficiency, water usage, waste management and indoor environment quality of a building or tenancy and its impact on the environment. It does this by using measured and verified performance information, such as utility bills, and converting them into an easy to understand star rating scale from one to six stars. For example, a 6 star rating demonstrates market-leading performance, while a 1 star rating means the building or tenancy has considerable scope for improvement.

NABERS is managed nationally by the NSW Office of Environment and Heritage, on behalf of Commonwealth, state and territory governments.

CBD is a national program designed to improve the energy efficiency of Australia's large office buildings and was established by the Building Energy Efficiency Disclosure Act 2010. The CBD program is delivered by the Australian Government Department of Climate Change and Energy Efficiency.

Under the CBD program, most sellers or lessors of office space of 2,000m^2 or more are legally required to disclose an up-to-date Building Energy Efficiency Certificate (BEEC) if they wish to sell, lease or sub-lease office space. BEECs are available for up to 12 months, must be publicly accessible on the online Building Energy Efficiency Register, and must include a NABERS Energy star rating for the building.

The NABERS Energy star rating excludes GreenPower but can be acknowledged on the BEEC. In practice, building owners do not purchase or place any value on GreenPower as it is not included in the NABERS Energy star rating.

The NABERS Energy star rating must also be included in any advertisement for the sale, lease or sub-lease of the office space and must exclude any GreenPower rating.

The statutory disclosure of the NABERS Energy star rating provides a strong market-based incentive for building owners to improve their properties with cost-effective upgrades that increases their return on investment and is key in building owners attracting or retaining anchor tenants which drives owners overall return on investment.

In July 2010 NABERS produced a ruling with a detailed methodology on the proportioning of energy for precinct scale trigeneration systems allowing for the accounting of both low carbon electricity and zero carbon thermal energy imported into a building from a precinct trigeneration energy centre in the NABERS Energy star rating. This enabled precinct scale distributed generation projects to proceed such as the Dandenong new development precinct scale trigeneration network in Victoria. The same rules would also be applicable to precinct scale renewable energy systems.

This approach was similar to how other countries proportion electricity and thermal energy from precinct, district energy or community energy scale distributed generation in their equivalent to NABERS Energy star ratings such as the Standard Assessment Procedure or SAP ratings in the UK Building Regulations Part L2A and associated Compliance Guide[14].

However, in August 2012 NABERS published a consultation position paper to renege the NABERS July 2010 ruling on precinct scale cogeneration and trigeneration so that electricity exported from distributed generation could no longer be accounted for in the NABERS Energy star rating. The City's submission[15] on the NABERS consultation position paper dated 23 August 2012 set out its opposition to NABERS reneging on their original July 2010 ruling.

Despite this and opposition from the vast majority of industry respondents to the NABERS consultation position paper NABERS published their ruling in October 2012 removing the original NABERS July 2010 ruling and discriminating against precinct scale distributed generation in favour of small scale stand-alone distributed generation in stand-alone buildings that do not export. This ruling is likely to jeopardise most precinct scale distributed generation schemes to the detriment of the public electricity infrastructure and electricity consumers.

The NABERS October 2012 ruling also runs counter to and conflicts with the Australian Government, Department of Climate Change and Energy Efficiency 'Inclusion of Energy Generation in Building Energy Efficiency Standards'[16] which recommends that the Building Code of Australia be modified to incorporate a method to calculate the impact of zero or low emission generation (ZLEG), ie, distributed cogeneration, trigeneration and renewable energy located on site, at

[14] UK Department of Communities and Local Government 'Non-Domestic Heating, Cooling and Ventilation Compliance Guide 2006 http://www.planningportal.gov.uk/uploads/br/BR_PDF_PTL_NONDOMHEAT.pdf

[15] City of Sydney submission to NABERS on the Review of the NABERS Ruling: 'Proportioning of Energy Used by Cogeneration and Trigeneration Systems' – 23 August 2012 http://www.nabers.gov.au/public/WebPages/DocumentHandler.ashx?docType=3&id=33&attId=0

[16] Australian Government, Department of Climate Change and Energy Efficiency 'Inclusion of Energy Generation in Building Energy Efficiency Standards – 9 May 2012 http://www.climatechange.gov.au/~/media/publications/nbf/inclusion-of-energy-generation-in-building-energy-efficiency-standards-pdf.pdf

precinct level or off site, and that the same method be used for NABERS. The report goes on to recommend that a ZLEG system needs to be connected to buildings by way of a private were network, a ‘virtual’ private wire network (ie, over the local public distribution network similar to the UK) or pipes carrying hot or chilled thermal fluid. The ZLEG system itself can be located on-site or off-site.

In view of the circumstances surrounding the decision to renege on the NABERS July 2010 ruling, the lack of industry support for this change and the conflict with the same Department’s ‘Inclusion of Energy Generation in Building Energy Efficiency Standards’ report the Productivity Commission should investigate this and review the NABERS October 2012 ruling, particularly as this ruling will significantly negatively impact on the proposals in the Productivity Commission’s report.

Other Barriers to the Take-Up of Distributed Generation

Other barriers may emerge such as unfair gas connection and/or use of system charges that will also impact on the take up distributed generation which will also need to be addressed by government and/or regulators if the full potential of distributed generation and benefits to electricity consumers set out in the Productivity Commission’s report is to be realised.

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23 November 2012

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