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May 24, 2011

Inquiry into Australia's Urban Water Sector
Productivity Commission
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RE: Urban Water Sector – Productivity Commission Draft Report response

General Electric (GE) welcomes the opportunity to provide comment on the Productivity Commission ("the Commission") Draft Report into its inquiry into Australia's Urban Water Sector.

General Electric

In Australia, GE employs more than 6000 staff across its businesses, including GE Energy.

GE's first project partnership in Australia was delivering electric motors for the Pyrmont Bridge, Sydney in 1902.

Since then, GE has worked with governments and local industry partners across to deliver major projects and initiatives, creating jobs, providing essential services and stimulating economic growth.

For instance, GE Energy is a major technology provider to the Gorgon LNG project, we have recently delivered the Darling Downs combined cycle gas turbine power station for Origin Energy and we are supplying technologies, including water treatment for the burgeoning coal seam gas industry in Queensland.

GE Energy's technology offerings span a broad range of fuels and renewable resources including electricity generation from high efficiency gas turbines, cleaner coal, wind, solar, biomass and smart grid products, as well as water and wastewater treatment for industry (such as mines and coal seam gas production), municipal and the environment.

In terms of water, GE offers a range of technologies, chemical products and expertise for industrial and non-industrial customers around the world for water purification, wastewater reclamation and water reuse to create new supplies, address environmental concerns, generate new sources of income and reduce costs.

In Australia, GE has worked with and has ambitions to continue to work with local partners and governments in applying our technologies and products in project as diverse as dust suppression and treatment of as part of dewatering mine sites, treating associated water extracted in unconventional gas production, reclaiming wastewater and redirecting high quality water for municipal wastewater treatment plants, improving water supplies for indigenous and remote communities.

In 2010, the Queensland Government acknowledged GE's contribution to the Cleaner Seas for Cairns project, providing wastewater treatment equipment to improve the quality of water discharged into the Great Barrier Reef Marine Park.

Productivity Commission draft report and recommendations

The Commission report and recommendations provide an important review of the interaction of public policy, government roles and responsibilities in the management and delivery of sustainable, affordable and quality water supplies for Australian homes, business, communities, industries and the environment; and the need for further reform.

The implementation of the National Water Initiative, the establishment of the National Water Commission (NWC) and the prioritization of water issues by the Council of Australian Governments in the last decade have driven significant improvements in the pace and delivery of reform in the water sector.

Therefore, GE welcomes the Commission's draft recommendation 14.3 for "progress against COAG agreed water reforms should be subject to monitoring"[1] and it recommends NWC undertake this role.

This recommendation aligns with the resolution of the NWC Stakeholder Forum for it to "take an even stronger national leadership role.... and reaffirmed the value of an independent voice able to advance national policy objectives that were evidence based and well grounded through consultation with governments, industry partners and water sector stakeholders".[2]

As the Commission has noted in its draft report, "the goal of reform is to ensure that water, wastewater and stormwater services are provided in a manner to maximize net benefits to the community."[3]

GE also welcomes the accompanying recommendation 14.4 for an independent review of the reform package within five years.

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[1] Productivity Commission, "Australia's Urban Water Sector – Draft Report", April 2011, page LX
[2] National Water Commission, "2011 Stakeholder Forum Communique", March 17, 2011
[3] Productivity Commission, May 2011, page XXIX

Role of governments

The Commission's draft finding (4.1) defines the scope of the role of governments to "develop policy frameworks and principles in relation to public health, the environment and service delivery.... of potable water, non-potable water, wastewater and stormwater services".[4]

The Commission identifies the distortion from actions by government such as "bans on particular augmentation options" (draft recommendation 6.1) and "supply augmentations and other urban water infrastructure" (6.2).[5]

On the latter, the Commission recommends that Australian, State and Territory governments not provide subsidies for water infrastructure and supply augmentation projects other than in instances where governments:

- "direct a utility to invest to produce a particular environmental outcome unrelated to its service delivery responsibilities and the subsidy is commensurate with the costs attributable to achieving the outcome [and]
- a formal process has identified that a particular community should be exempted from the requirement to fully recover costs through water charges".[6]

GE will comment on the Commission's recommendations and findings about the role of governments in:

- water recycling
- compliance with Australian Drinking Water Guidelines
- regional water and wastewater infrastructure
- water and wastewater services for Indigenous communities

[4] ibid, page XLIII
[5] ibid, page XLIV
[6] ibid

In addition, GE would like to comment on the recovery, reconstruction and betterment of water and wastewater services following natural disasters, such as the severe recent flooding and Cyclone Yasi in Queensland.

GE believe these areas of water and wastewater service provision should be eligible for government subsidies, because "there are demonstrable public benefits that would not otherwise be able to funded by the customer base." Subsidies should not fund infrastructure projects in metropolitan areas".[7]

Water recycling

The Commission's draft report highlights the growing, yet small contribution recycled water provides as a source of water in Australia.

Of the 2338.2 gigalitres (GL) sourced in Australia in 2008-09, only 4.2% (or less than 100GL) is recycled water.

At the 2007 Federal election, the Australian Labor Party committed, if elected, to implementing a recycled wastewater target of 30% by 2015 and "what local and state governments do within that framework is for them to decide based on their local circumstances".[8]

The Commission recommends (8.2) "neither governments nor regulators should mandate water use efficiency and conservation activities, unless there is a market failure present and it is clearly established that the social benefits of intervention exceed the social costs".[9]

[7] National Water Commission, "Urban water in Australia: Future directions", April 2011, page 46
[8] AAP, "Rudd opaque about recycled water split", February 23, 2007.
[9] ibid, page XLVII

The NWC believes impetus for recycling was required reforms to governance (including national political leadership), costing processes, science and technology.[10] However, the NWC has recommended that governments "should move away from predetermined recycling targets and.... output-based regulatory requirements should be favoured over input-based approaches to give water service providers and other affected parties flexibility in meeting underlying objectives efficiently".[11]

While the Government expanded the Renewable Energy Target (RET) to 20% by 2020 and increased the corresponding obligations on liable entities under the *Renewable Energy (Electricity) Act 2000* to meet this enhanced target, any target for increasing recycled water as a source remains aspirational and not legislated for.

Completion of recent water supply infrastructure, including more than $9.7 billion investments in desalination plants to supply Australia's major mainland capital cities, and replenishment of many water storages have limited the need for new supply projects.

GE believes the national RET for renewable electricity could provide a model for encouraging development of alternative water supplies, such as recycling, particularly in regions of unstable and unreliable water supplies.

Compliance with Australian Drinking Water Guidelines

GE supports the Commission's recommendation (13.5) for the Australian Drinking Water Guidelines (ADWG) be mandatory and implemented via legislation, and performance against the Guidelines should be "publicly reviewed and reported on annually by State and Territory Governments".[12]

[10] National Water Commission, "Urban Water Recycling: National Water Commission position", November 2010
[11] National Water Commission, "Urban water in Australia: Future directions", April 2011, page 48
[12] Productivity Commission, April 2011, page 427

While the Commission envisages sanctions against water utilities, directors and councillors for "risks associated with non-compliance", GE makes no comment on these provisions.

However, GE believes investment in water infrastructure to comply with ADWG is a public health issue.

The Commission regards "access to clean water for drinking and washing, and reliable wastewater services are vital for public health".[13]

GE also notes the National Health and Medical Research Council expects to release a revised version of the ADWG this year.

Regional water and wastewater infrastructure

National Water Commission chair Ms Chloe Munro recently called on "Australia's governments to step back from direct intervention in urban water and give the industry incentives and freedom to innovate" noting recently completed infrastructure investments and improved supply security. give us the opportunity to embark on longer-term planning for a more efficient, adaptive and resilient water future".[14]

However, Ms Munro acknowledged "reform is also urgently needed to ensure acceptable standards of water and sewerage services for customers in some regional areas"[15]

Similarly, the Commission also recommends (13.3) that "jurisdictions should identify those regional utilities that are unable to provide safe and secure water and wastewater services for economic reasons.... State and Territory Governments should

[13] ibid, page 65
[14] Chloe Munro, "National Water Commission urges action on urban water", April 7, 2011
[15] ibid

subsidise the provision of water supply and wastewater services in regional areas where it is uneconomic for the utility to provide these services safely and efficiently.... The case for providing subsidy funding for capital works, financial incentives for reform and assistance for affected local councils should be determined by State and Territory Governments".[16]

The Local Government of Association of Queensland's (LGAQ) submission to the Commission highlighted the challenge providing water and wastewater services in regional communities with ageing assets, access to skills and funding infrastructure upgrades.

[16] Productivity Commission, ", April 2010, page LVII.

It stated "many [wastewater] treatment plants in regional Queensland were installed soon after the Second World War.... many are in need of replacement, but the adoption of new technology in small and remote communities must be approached carefully with understanding of local capacity to operate and maintain the systems into the future".[17]

LGAQ policy states "that the Commonwealth and State Governments, through COAG, must recognize the need for greater capital investment in water infrastructure to meet future needs and foster regional development".[18]

The pressures on regional water and wastewater service providers is compounded by regulatory requirements, such as minimum treatment standards for Queensland wastewater treatment plants discharging into the Great Barrier Reef Marine Park.

It also states "any increases in the standard of treatment required for effluent should be phased in over an appropriate period and be accompanied by an appropriate level of State or Federal Government funding"[19].

The key public policy driver for improving water quality is the Coastal Management Plan of the Queensland Government.

According to the Great Barrier Reef Marine Park Authority, "sewage treatment plants occur along the length of the southern and central Great Barrier Reef coast. An increasing proportion of sewage is tertiary treated or recycled, partly to reduce the direct impacts on the Great Barrier Reef. Under Queensland Government policy all coastal sewage treatment plants that discharge into the marine environment must

[17] LGAQ, "Submission to Productivity Commission Issues Paper – Australia's Urban Water Sector", 2010, page 14.
[18] Local Government Association of Queensland, "Policy statement – Water supply and sewerage", Section 8.5
[19] ibid

meet the most stringent treatment standards (i.e. tertiary treatment) by 2010....As populations grow, so will the need to address increases in sewage outputs."[20]

In addition, the Australian and Queensland Government have worked in partnership in 2003 to implement the Reef Water Quality Protection Plan.

This Plan's "immediate goal is to halt and reverse the decline in water quality entering the Reef by 2013. The long-term goal is to ensure that by 2020 the quality of water entering the Reef from adjacent catchment has no detrimental impact on the health and resilience of the Reef".[21]

There is a range of wastewater treatment plant projects being advanced by local councils in the Great Barrier Reef Marine Park catchment.

However, local councils must consider the financial implications of delivery wastewater treatment plants to the size, scope and timeframes for their budgets and those of their ratepayers with or without assistance from the Queensland and/or Australian governments.

The Queensland Government has proposed $45 million per annum Local Government Grants and Subsidies Program (LGSSP) to commence on 1 July 2011. Projects eligible for funding under the LGSSP include sewage treatment plant upgrades, water pipelines, erosion management and civics projects.

Councils are eligible for funding under the LGGSP must demonstrate a limited capacity to fund major infrastructure in their respective communities.

Any subsidy provided by the Australian Government would make the wastewater projects more viable and be developed at a scale that plans for projected growth

[20] Great Barrier Reef Marine Park Authority. "Great Barrier Reef Outlook Report: Factors Influencing the Reef's values", 2009, page 102

[21] Australian and Queensland governments, "Reef Water Quality Protection Plan 2009 – For the Great Barrier Reef World Heritage Area and adjacent communities", 2009, page 7

levels, and it would recognize that new and upgraded wastewater treatment projects can:

- help manage population growth along the Queensland coast;
- support joint Commonwealth-State efforts to improve water quality in the GBR Marine Park;
- minimize increases in water and associated charges by new infrastructure investment; and
- reduce pressure on drinking water supplies by providing additional water for non-potable use.

A source of Australian Government funding would be the reallocation of funding from the National Urban Water and Desalination Plan for water supply security projects for communities with populations over 50,000. The program's funding was reduced by $85.5 million under the Government's 2011-12 Budget due to reduced demand for assistance. Remaining program funding for the next two financial years is $574.2 million.

GE believes the Australian Government should also consider reallocating funds from the National Urban Water and Desalination Plan to support upgrade of water and wastewater services in remote indigenous communities.

Water and wastewater services to Indigenous remote communities

As per the Commission's recommendation for compliance with ADWG, GE welcomes the Commission's recognition of the need for greater attention on water and wastewater services to remote indigenous communities.

GE supports the Commission's recommendation for State and Territory Governments to "undertake regular, public reviews of water and wastewater outcomes in

indigenous communities.... [and] assessed against the same metrics that are used to measure service quality in non-indigenous communities"[22].

The Australian Government has committed to a wide-ranging Close the Gap program to reduce the "gap" in life expectancy between indigenous and non-indigenous Australians. The 2008 Close the Gap National Indigenous Health Equality Summit Statement of Intent committed the Australian Government to achieving indigenous health equity by 2030 and providing necessary primarily health care and infrastructure to meet that goal by 2018.

In his submission to Infrastructure Australia in October 2008, Aboriginal and Torres Strait Islander Social Justice Commissioner Mr Tom Calma recommended it prioritise infrastructure to provide "all indigenous households with potable water supplies and sanitation systems that enable healthly living".[23]

In February 2010, the Northern Australia Land and Water Taskforce recommended to the Australian Government "as an urgent priority, governments should ensure that all communities in northern Australia have access to drinking water that meets appropriate water quality standards".[24] It noted "quality drinking was is unevenly supplied across the north, with many indigenous communities and some regional towns not having access to potable water.... [which] poses unacceptable risks to human health and well-being and should be addressed by all governments as an urgent priority".[25]

Similar to regional water and wastewater services, GE believes the upgrade of these services in indigenous communities satisfy the "demonstrable public benefit" test and should be eligible for government subsidies.

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[22] ibid, page 425
[23] Mr Tom Calma, "Submission to Infrastructure Australia", October 2008, page 11
[24] Northern Australia Land and Water Taskforce, "Final Report", March 2010, page 27
[25] ibid, page 4

In April 2010, the Australian Government announced $51.7 million for 18 projects in 17 indigenous communities to "improve water supplies and wastewater services in remote communities around Australia to benefit more than 17,000 people".[26]

The inaugural meeting of the Northern Australian Ministerial Forum in December 2010 identified water as one five key themes, and report back to the Forum in June this year on the Australian Government's response to the Northern Australia Land and Water Taskforce report and recommendations.[27]

The Government stated the funding supported objectives of COAG's Strategy on Water and Wastewater Services in Remote (including Indigenous) Communities to "provide sustainable, secure and safe water supplies and wastewater services; provide a level of service that meets the regulatory standards that would apply to any other community of similar size and location and encourage responsible use of water and, where appropriate, water conservation".[28]

Water/wastewater services recovery and betterment following natural disasters

The tragic floods and Cyclone Yasi in Queensland and other recent natural disasters have highlighted the importance of robust response, recovery, reconstruction and mitigation efforts for essential public infrastructure, including water and wastewater.

Natural disaster management is constitutionally a State and Territory responsibility; however, the Australian Government has played and will continue to play an important role in the managing natural disasters and the impacts.

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[26] The Honourable Dr Mike Kelly AM, MP, "$51.7 million to improve water and wastewater services in 17 indigenous communities" April 23, 2010

[27] Northern Australia Ministerial Forum, "Joint Communique", December 13, 2010

[28] Council of Australian Governments, "Strategy on Water and Wastewater Services in Remote (including Indigenous Communities", 2008

The Australian Government's Emergency Management Australia and its functions include, but are not limited to, the administration of the Natural Disaster Relief and Recovery Arrangements (NDRRA).

Following the Queensland floods, GE believes the Australian Government should seek to clarify and standardize, with States and Territories, the definition and eligibility of "essential public assets" for restoration and replacement funding under NDRRA.

Through NDRRA, the Australian Government provides 50% to75% of the State and Territory expenditure on the restoration or replacement of essential public infrastructure.

According the current NDRRA guidelines, the definition of essential public infrastructure and its restoration, replacement or betterment is a "judgment for the State"[29].

Risk identification and mitigation and planning to ensure quality, continuity and restoration of services, such as electricity and water supply, are a responsibility for owners of the infrastructure and providers of the service.

However, failure to maintain or in the event of a disruption to services can pose health and other risks for the affected communities.[30]

In February, the Australian and Queensland Governments announced a $315 million Queensland Local Council Package to "ensure that disaster-affected communities have the water and sewerage facilities, transport infrastructure

[29] Department of Transport and Regional Services, "Natural Disaster Relief and Recovery Arrangements: Determination 2007", page 4

[30] The Australian Journal of Emergency Management, "Flood risk management in Australia", Vol. 23 No. 4, November 2008

and employment support they need to get back on their feet as quickly as possible".[31]

Federal Treasurer The Honourable Wayne Swan MP said: "These announcements go well beyond our obligations under the Natural Disaster Relief and Recovery Arrangements, in recognition of the unprecedented scale of the damage caused to communities across Queensland in recent months."[32]

The NDRRA guidelines could provide additional clarity and uniformity about the definition of "essential public assets" performing an "eligible undertaking", again as decided by the respective State Government. There is scope within the guidelines for the restoration or replacement to pre-disaster standard or its "betterment", which is a more disaster-resilient standard.[33]

A cruel irony of the floods in Queensland was the loss of potable water supplies over an extended period for some inundated communities, forcing councils to implement drought-level restrictions, cart in water for community use and use of purification systems operated by the Australian Defence Force.

Similarly floods and other disasters impacted on electricity and gas supplies, sewerage treatment and telecommunications. All essential for affected communities to start the work of recovery.

The Australian Government commissioned the "Climate Change Risks to Australia's Coast" report, which found that "there has been little analysis of the implications of climate change for the provision of essential services in the coastal zone.... [and] facilities that are underpinning delivery of services are in close proximity to the coast and could be at risk of inundation and erosion as a result of climate change".[34]

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[31] The Honourable Wayne Swan MP, "Rebuilding Queensland Local Communities," February 26, 2011
[32] ibid
[33] Department of Transport and Regional Services, "NDRRA Determination 2007", pages 4-5
[34] Department of Climate Change, "Climate Change Risks to Australia's Coast", November 2009, page 20

The Report recommended a national audit of critical infrastructure in the coastal zone.

Infrastructure Australia (IA) could be tasked to undertake the audit for flood prone or at risk critical infrastructure, with the terms of reference and final recommendations considered by the Council of Australian Governments (COAG).

The Australian Government's 2011-12 Budget allocated $36 million over four years for IA, and it would "work closely with States and Territories and the private sector to promote better targeted investments in infrastructure linked to the National Priority List which IA provides to the COAG".[35]

Significantly, as the Commission noted, urban water sector can also support flood mitigation objectives.[36]

GE recommendations

1. progress against Council of Australian Governments (COAG) agreed water reforms should be subject to monitoring and this be undertaken by the National Water Commission (NWC);

2. an independent review of urban water reform package be conducted within five years;

3. examine the national Renewable Energy Target as model for encouraging development of alternative water supplies, such as recycling, particularly in regions of unstable and unreliable water supplies;

4. compliance with Australian Drinking Water Guidelines be mandatory and implemented via legislation, and performance against the Guidelines should be publicly reviewed and reported on annually by State and Territory Governments;

[35] Australian Government, "2011-12 Budget Overview", May 11, 2011, page 16
[36] Productivity Commission, April 2011, page 70

5. water and wastewater service delivery in regional areas and remote indigenous communities should be eligible for government subsidies and the Australian Government reallocate funds from the National Urban Water and Desalination Plan for water and wastewater services in regional areas and remote indigenous communities; and

6. recovery, reconstruction and betterment of water and wastewater services following natural disasters be eligible for Natural Disaster Relief and Recovery Arrangements assistance.

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