



INQUIRY INTO A SUSTAINABILITY CHARTER

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A submission to the House of Representatives Standing Committee on Environment and Heritage Inquiry into a Sustainability Charter from the Association of Consulting Engineers Australia (ACEA)

ACEA SUBMISSION

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The Association of Consulting Engineers Australia (ACEA) is an industry body representing the business interests of firms providing engineering, technology and management consultancy services.

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INTRODUCTION

THE CONSULTING ENGINEERING INDUSTRY IN AUSTRALIA

The Association of Consulting Engineers Australia (ACEA) represents the interests of nearly 250 engineering and technology businesses providing consulting services to government and private sector clients throughout Australia and in more than 40 countries across the globe.

The value of construction projects designed by ACEA member firms each year is estimated to be \$11 billion. The industry is a significant contributor to the Australian economy in terms of both revenue, employment and provides essential services to clients and the community.

ACEA member firms offer a large range of design services for major projects in the fields of building, infrastructure, transport, communications and information technology, project management, environmental management, geotechnical and electrical services, mining, oil and gas.

ACEA firms employ more than 10,000 staff in Australia and many tens of thousands ancillary staff. ACEA is one of the largest members of FIDIC, the international association of engineering, technology and management firms related to the built and natural environment. FIDIC has around 70 member associations worldwide.

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ACEA SUMMARY POSITION

The quality of the environment and the built environment is of increasing concern to community, industry and business in Australia. ACEA's member firms have a commitment to the provision of the world's best practice with the design sector of the built and infrastructure environments.

The World Commission on Environment and Development (the Brundtland Commission) in their 1987 report *Our Common Future* defined sustainable development as:

"Development that meets the needs of the present without compromising the ability of future generations to meet their own needs."

Along with government, there is a need for built projects to be aligned with the commitment to sustainable development and resource management initiatives.

The burden of assessing how our development meets those needs is thought by many to the responsibility of society. Therefore, ACEA would like to examine whether there is enough understanding of how the built environment compromises the abilities of future generations and whether that knowledge is appropriately disseminated and whether it is poor natural resource management that is the chief reason for that compromise.

GENERAL: QUESTIONS FOR CONSIDERATION

Should a sustainability charter consist of aspirational statements, set targets (such as measurable water quality) or both?

Aspirational statements are needed to cover a framework approach to the systems of government that can address nationally significant sustainability issues. Specific statements should acknowledge the priority issues requiring national responses, such as climate change, land degradation (including salinity), water management, population, health and security of ageing population and policies for taxing and financing required programs.

ACEA member firms seek to actively promote the application of sustainability indicators based on Agenda 21 (or other appropriate source such as GRI) to describe the performance objectives as a means of aligning individual investment projects to whole of society goals. It would be preferable for the inquiry to examine if our society's current goals are consistent with sustainability development and to utilise the Charter as a way to re-set those goals.

In addressing this, we must beware of definitional debates that draw a focus on environmental objectives as distinct from the economic and social. Sustainability is about the integration of all three categories and so aspirations can be stated in a way that sets out the integration.

What research will be needed to develop and support the Sustainability Charter?

For an Australian Sustainability Charter to be effective, Government needs to facilitate the accessibility of relevant and current data on the status and performance of Australia that supports an integrated view of social, environmental and economic conditions. Much of this is done through State of the Environment Reporting, the Australian Bureau of Statistics, the Australian Taxation Office and other national agencies. However, much of this data is collected and held in "silos" suitable for limited purposes rather than flexible analysis to support a broad range of decisions on diverse criteria. A useful focus for the Federal Government would be to integrate the existing activities in such ways that permit:

- uniformity in terminology, gathering and reporting of data by each of the agencies
- transparency of sustainability indicators and illustration of how government and private expenditures are linked to key policy
- publication of benchmark performances against sustainability indicators on regional bases to assist local decision making

Can existing standards (such as the Water Efficiency Labelling and Standards (WELS) Scheme) be applied to the Sustainability Charter? What are they?

Existing standards can be utilised but we shouldn't just focus on these standards, we need to encourage people to go beyond the standards. A solution would be to provide incentives or rewards to encourage people to go beyond the existing standards.

Can the Charter be framed in such a way to ensure that it can be integrated into all levels of government decision making?

The Charter should align with the Australian Constitution and be capable of integration into state and local governments. There should be a development of uniform renewable energy programs in each state and territory.

There is a need to look at and identify the various opportunities and constraints that lie within the different levels of government. For example, local governments deal directly with social and environmental issues (waste generation, graffiti, stormwater, soil erosion and land clearing), however, they are bound by the amount of resources they have at their disposal or through legislation.

Will there be a cost/gain to the economy by introducing the target(s)?

It is a significant gain because if we are unsustainable, there will be no economy at all.

There should not be any net cost to the economy. Pursuit of targets may create additional jobs, business opportunities or technologies so there is the potential that there will be gains to the economy as opposed to costs. Setting targets may force the economy to be more efficient rather than act as a hindrance.

Sustainability issues such as climate change are directly relevant to the members of ACEA. This is because effects of many sustainability issues (such as climate change) will occur within the economic life of infrastructure and assets being designed and built now. It is our belief that the real costs to the economy will only be seen if sustainability issues are not addressed in a timely manner and catastrophic damage or infrastructure system failures occur as a result.

Could a sustainability charter be incorporated into national State of the Environment reporting?

The two can and should be integrated. However, State of the Environment reporting may be required to adapt to effectively support the Sustainability Charter.

The SoE report may not cover all sustainability issues such as all social and economic issues so it might be a required need to amend the SoE report.

Is National Competition Policy a good template for consideration of incentive payments for sustainable outcomes?

ACEA would suggest not relying just on incentive payments as the National Competition Policy. Legislation and other mechanisms should be used in conjunction with NCP.

Sustainable development incentives need to be flexible enough to permit Government to:

- invest profitably in public private partnerships for programs and projects that will reduce government liabilities
- levy penalties on a sliding scale on non-renewable resources.

How should payments be awarded under the Sustainability Charter?

Payments should take the form of government investment possibly in public private partnerships for programs and projects that have an investment case that aligns to objectives established under the Charter.

Funding should be authorised and allocated by the relevant ministers at Federal and State level on the recommendation of competent agencies who have assessed the proposed project as contributing to the Charter and its priority with respect to competing proposals.

Is it possible to measure cultural and social values in relation to a Sustainability Charter?

As discussed above, ACEA member firms actively promote the application of sustainability indicators based on Agenda 21 to describe the performance objectives as a means of aligning individual investment projects to whole of society goals. GRI provides an alternative framework for businesses, although, it is not linked to the international agreement on what constitutes the goals of sustainable development. Australian indicators can be formulated consistent with these frameworks.

One of the most powerful methods that the Inquiry could consider would be the adoption of one of the “well-being” indexes, such as the Sustainable Net Benefit Index alongside GDP as a prime measure of national progress.

THE BUILT ENVIRONMENT: QUESTIONS FOR CONSIDERATION

What objectives are applicable to the built environment? How would these be measured?

An important objective is to establish a set of relevant, comprehensive and appropriate indicators based on building type and predominant usage. It is likely that there will be a degree of trial and error as the efficacy of indicators is assessed over time. As knowledge improves, some indicators may become redundant and new ones identified.

The measurement of objectives depends upon how many resources including funding can be thrown at monitoring and auditing.

Primary indicators to measure may include water use, greenhouse gas emissions, materials, sustainable transport and built environment life cycle impacts as well as many other sustainability indicators.

How should we rate the sustainability of existing building infrastructure? Could a measurement of level of retro-fitting achieve this? How would levels of retro-fitting be measured?

The degree to which existing building infrastructure detracts from societal goals of sustainable developed can be rated by a base line assessment against the indicator set. Asset owners should have the flexibility to determine the levels of retro-fitting required to meet society's expectations. Industry has commenced looking at building assessments. Examples are NABERS, Green Star and the Property Council of Australia's Building Quality Matrix.

Do we need to protect heritage buildings as part of the sustainability charter?

The Charter should determine whether heritage values contribute to sustainable development or not. Some aspects of this question are already addressed through the Burra Charter which provides guidance for the conservation and management of places of cultural significance and is based on knowledge and experience of Australia's ICOMOS members.

Can existing building standards, such as the 5 star rating system be incorporated into the Sustainability Charter?

The 5 star rating systems can be incorporated into the Charter especially in relation to energy and water efficiency standards.

It is a know fact that energy saving strategies could be achieved by compromising occupant comfort e.g. widening the comfort zones in the control systems or de-energising air conditioning plants prematurely.

WATER : QUESTIONS FOR CONSIDERATION

How should water quality be measured?

Water quality should be measured by the establishment of a set of relevant and appropriate indicators such as Australian drinking water guidelines. Water quality should also be measured in terms of differing needs for different end-uses. Water recycling and reuse is emerging as a priority issue to ensure sustainable water supplies as surface water catchment infrastructure comes up against resource constraints.

Should targets be focused on reducing water consumption, increasing water re-use or both?

It is important for targets to focus both on reducing water consumption and increasing water re-usage.

A more valid question could be whether the water use in question is appropriate. A good example of this is growing wet rice in a high evaporation environment such as the Riverina together with other attendant problems (shallow rooted vegetation, remnant streams etc).

ACEA believes climate change also needs to be urgently addressed as this poses one of the most significant and immediate threats to water supplies and infrastructure in Australia. The overwhelming majority of recent independent research on climate change shows that the potential seriousness of this issue cannot be understated.

How can we measure the health of water catchment areas?

Measuring the health of any water catchment area is a complicated matter. One approach would be to define each water catchment as a productive asset in a wider system of environmental capture, storage, distribution, use, reuse, treatment and recycling to the environment.

The sustainable capacity of that system may be determined by the asset manager through a program of technical investigation, environmental impact assessment and stakeholder engagement. The catchment itself would be based on risks to the catchment being able to play its part in delivering the sustainable system capacity. A measure of the health of the catchment might be the "annualised management costs of controlling catchment risks per annual litre of sustainable catchment yield".

ENERGY : QUESTIONS FOR CONSIDERATION

How should we measure the use of renewable energy?

Renewable energy is defined in terms of how it is both used and produced. The existing Green Power scheme provides a means of certifying the generation of renewable electricity from generation capacity built since MRETs were introduced. A similar scheme could be established to certify a wider range of renewable energy production operations. It is necessary to know the proportion of renewable energy in terms of overall energy generation. The issue at hand is the trend over time and ideally it should be increasing. The other side of the coin, however, is the uptake of renewable energy by consumers. Unless there are incentives to encourage uptake, there will always be difficulty in increasing generating capacity from renewable sources.

How do we encourage an increase in renewable energy use?

The most appropriate means is to impose carbon trading or a resource rent tax on the use of non-renewable energy resources. Carbon trading derived from carbon sources that are not demonstrably being renewed at the same rate as they are used. The MRET scheme was successful in encouraging investment in renewable energy generation. The ACEA suggests this should be extended.

Economic mechanisms are likely to be the most effective tool; however, care will need to be taken with regards to defining costs and benefits. There will need to be acknowledgement that continued usage of fossil fuels does have consequences (global warming) and acceptance that these consequences are undesirable and appropriate action must be taken.

There should be incentives for increasing the proportion of energy generation from renewable resources and penalties for use of non-renewable energy sources. Currently non-renewable energy is touted as costing more to produce than from non-renewable sources.

Can we measure the awareness of the environmental, economic and social benefits of energy efficiency and renewable energy?

These can all be measured through collecting evidence that energy choices are made consciously. Energy clients are able to collect this data as part of their customer payment systems.

TRANSPORT : QUESTIONS FOR CONSIDERATION

How do we judge the efficiency of transport systems?

For judging the sustainability of transport systems we need to focus on both effectiveness and efficiency. By focusing first on effectiveness, we can consider the separate transport needs of people and mobility. This permits measures to focus on how efficiently unavoidable journeys and movements are achieved. We believe the main social, economic and environmental issues of system congestion, air quality and greenhouse gas emissions need a fundamental strategic rethink.

What transport infrastructure measures will reduce private transport needs? How do we measure these?

A sustainable transport strategy should be adopted and continually improved under the authority of the Minister for Transport. It is necessary to understand the balance for funding to different transport modes. Government subsidies to the automotive industry could also be targeted to encourage research and development of resource efficient solutions. There is a need of strategic input into peak oil production and energy security.

Transport infrastructure measures could be:

- Encourage car pooling and car sharing
- Provision of a more efficient public transport system
- Pockets of free public transport as incentive
- Survey transport needs of the population
- Focus on connecting Sydney suburbs rather than focusing on connections to the CBD

CONCLUSION

The Charter should represent this nation's fair contribution to the global goal of sustainability.

The ACEA suggests an examination of the issues and solutions that will determine correct behaviour, including GDP as the national indicator of progress. We understand that the built projects for which we are responsible have a significant effect on the nation's development and therefore, on the nation's ability to achieve sustainability. ACEA would support the utilisation of appropriate indicators that would measure on performance.

The infrastructure we are designing and building requires a commitment to quality and innovative management of sustainable development. Due to the long life of infrastructure assets and the difficulty of changing existing systems, addressing sustainability issues should be immediately discussed and reviewed. Many of the sustainability issues that seem decades away are now imminent from an engineering and infrastructure planning perspective.

We hope the Federal Government will be supportive of innovation and new technologies and takes on the challenge of trying and/or improving new sustainable outcomes.

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DEFINITIONS

Agenda 21

United Nations Division for Sustainable Development

Brundtland Commission

Formally named the World Commission on Environment & Development

Burra Charter

The Australia ICOMOS Charter for places of cultural significance

GDP

Gross Domestic Product

Green Star

Rating tool for commercial office buildings by the Sustainable Energy Authority and Green Building Council of Australia

GRI

Global Reporting Initiative

ICOMOS

International Charter for the Conservation and Restoration of Monument and Sites

MRET's

Midwest Renewable Energy Tracking System

NABERS

The National Australian Built Environment Rating System

SoE Report

State of Environment Report, Australian