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18 April 2008

Committee Secretary
Senate Economics Committee
Department of the Senate
PO Box 6100
Parliament House
Canberra ACT 2600
Australia

Dear Sir/Madam

NATIONAL MARKET DRIVEN ENERGY EFFICIENCY TARGET ("NMDEET") BILL

Thank you for the opportunity to comment on the private members' bill entitled *National Market Driven Energy Efficiency Target Bill 2007 [2008]* introduced by the Australian Democrats last year. Szencorp re-submits the following comments for your consideration.

The benefits of energy efficiency

Szencorp notes and wholly endorses the sentiments of the Second Reading Speech on this Bill which was made in Parliament by Senator Lyn Allison on 14 August 2007 ("the Second Reading Speech"). While energy efficiency has long been recognised as the most cost effective response to greenhouse emission reductions, further to this Szencorp believes it is essential to policy development in this area to further define the scale of the actual level of ambition, i.e. the quantum of energy to be saved. Much political focus has been on the emissions intensity of electricity generation, and the importance of a supply-side target that ensures renewables contribute at least 20% of generation by 2020. However, Szencorp agrees with the contention of the Second Reading Speech that the case for a comparable energy efficiency target as outlined is even more compelling:

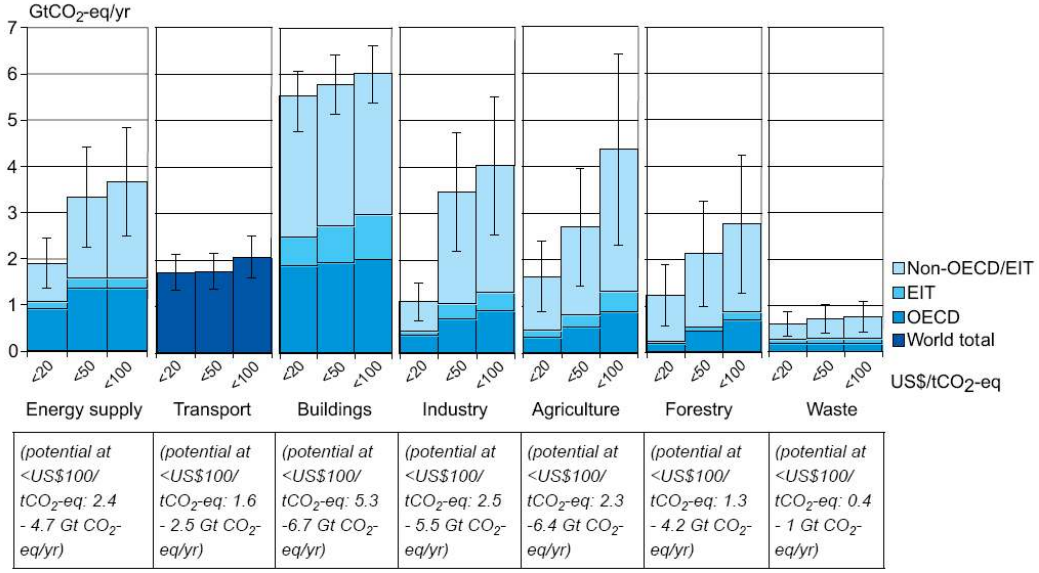
- According to recent reports by the Intergovernmental Panel on Climate Change (particularly its report received from Working Group III), there is global potential to cost-effectively reduce approximately 30% of projected baseline emissions by 2020

from the residential and commercial building sectors, the highest among all sectors studied.

- This figure only considers negative cost opportunities (i.e. benefits), that were found to be so abundant that higher cost opportunities were not considered. This figure is therefore an underestimate.

The IPCC goes on to quote numerous published studies showing that energy savings of 50 to 75% can be achieved in commercial buildings through aggressive implementation of integrated sets of measures.

Figure 1 – IPCC's Fourth Assessment Report Working Group III
Estimates of abatement potential by sector



Szencorp firmly believes that existing building retrofitting should be a clear focus of any mitigation efforts. New buildings make up a tiny percentage of overall building emissions and policies that target them such as incremental improvements to building codes and standards will not provide the scale of momentum required for implementation of energy efficiency.

As the Second Reading Speech notes, the benefits of energy efficiency to Australia have been pointed out extensively under economic modelling carried out for the National Framework for Energy Efficiency. In addition, recent Australian research (refer Attachment 2) completed under the auspice of the Australian Sustainable Built Environment Council (ASBEC) shows that, inter alia:

- By 2050, GDP could be improved by around $38 billion per year if building sector energy efficiency is adopted, compared to previous economy-wide estimates of the 60 % "deep emission cuts" scenario.

- Energy efficiency in residential and commercial buildings could halve electricity demand by 2030, and reduce it by more than 70 per cent by 2050, on a cost-neutral basis.
- Energy savings in the building sector (which accounts for 23 per cent of greenhouse gas emissions) could reduce the costs of greenhouse gas abatement across the whole economy by $30 per tonne (or 14%) by 2050.

The need for policy measures that target energy efficiency

There is a general view held by some economic theorists that the potential for cost effective energy efficiency in existing buildings is being taken up; in economic terms, this view holds that agents are behaving rationally in delivering an optimal level of energy efficiency. From this logic follows a conclusion that complementary measures for energy efficiency alongside an emissions trading scheme are not required. However it is conclusive that the market operates less than perfectly in delivering energy efficiency due to a number of non-price sensitive market characteristics. This means that, despite the apparent economic incentives, smarter energy use is often not taken up. A great deal of relevant work has been done that examines the true dynamics of decision making for energy efficiency, and its non-rational behavioural aspects (see in particular IEA (2005) and works authored/co-authored by Richard Thaler in "Useful References and Further Reading" listed below).

Clearly, private actors face barriers other than financial barriers, real or perceived, which inhibit better energy practice. As a result incremental increases in financial incentives by, for instance, attributing a price to carbon dioxide emissions through emissions trading will not in themselves unlock the energy savings potential through ever louder appeals to economic rationality; complementary measures are required to be directed specifically at initiating smarter energy use. In relation to energy efficiency a case can be made for what Sunstein and Thaler (2003) called "libertarian paternalism", that is, attempt to steer people's individual choices in welfare-promoting directions without eliminating freedom of choice, to the achievement of broader societal goals.

Barriers to the uptake of smarter energy use practice have been well recognised in many studies (including under the National Framework for Energy Efficiency, and in the Garnaut Review's Issues Paper 5), the most important of which broadly include:

- ***Behavioural issues (e.g. lack of priority, short-termism, cultural inertia, non-core business activity)*** - electricity typically makes up a small percentage of business costs (estimated by the National Institute of Economic and Industry Research) at under 3% of total expenditure for most economic sectors. Further, there is a lack of understanding of potential cost-effective savings options and available expertise or mechanisms for financing and delivering them.

- ***Split incentives*** – in many cases the party incurring the capital cost of energy efficiency measures does not receive the saving benefits of the upgrade, e.g. between landlords and tenants of a building.
- ***Transaction costs (especially measurement and/or verification)*** - the recognition of savings often requires the aggregation of a large number of small energy saving actions, making transaction costs of realising the incentives prohibitive in some cases.
- ***Coupling of energy consumption and electricity retailer and distributor profits*** (noting that energy savings techniques and products can offer greater margins for retailers than the sale of electricity)
- ***Network pricing (avoided infrastructure investment)*** - due recognition is not currently given to the important role some technologies can play in reducing network costs and/or peak loads.
- ***Bidding schemes*** – Efforts put into submitting bids for funding waste scarce industry resources (engineering) and can create long delays or uncertainty for suppliers and customers
- ***High hurdle rates and incrementalism*** - the selective implementation of opportunities that could be considered "low hanging fruit" impedes implementation and cost-effectiveness of deeper saving programs. Technology for energy savings cannot be applied on a purely incremental basis – often to achieve greater savings projects must be tackled in an integrated way to achieve synergies.
- ***Access to capital*** – while energy efficiency can provide an attractive return there are many competing and better understood demands for investment capital.
- ***Research, development and deployment issues.***

It can be argued that many of these transaction costs and information asymmetries do not automatically and of themselves justify government intervention. However the public good nature of the greenhouse abatement benefits and the reduced overall cost of abatement that can potentially be generated create a clear role for government to provide incentives to accelerate uptake of energy efficiency.

As noted in the fifth dot point above, not only does smarter energy use lower the cost of reducing greenhouse emissions, it reduces the costly network infrastructure investments otherwise required to meet growing demand. This point is raised in some detail by the Second Reading Speech. From an infrastructure point of view, it is conclusively cheaper to meet growing electricity demand at the margin not by creating new network capacity, but by improving the capability of the existing network by reducing waste. Estimates by NEMMCO put the cost of upgrading/augmenting Australia's electricity delivery infrastructure at approximately $37 billion dollars to 2020; approximately $4-6 billion a year has been

committed for the next five years (sourced from reports at http://nemmco.com.au/nemgeneral/040-0048.htm).

Alongside the network infrastructure savings are savings in electricity transmission losses, which are significant depending on the age and condition of existing infrastructure. It is much more cost effective to generate electricity locally for local use than to create an electricity transport requirement through insistence on centralised power supply. This also carries benefits for the security of supply to particular regions. Current network pricing and regulatory regimes pay little acknowledgement to this aspect of electricity supply, such that distributed/embedded generation appears unfairly expensive in comparison to centralised options (e.g. fossil fuel, nuclear, large-scale wind or geothermal power supply options).

Setting an energy efficiency target

The need for an articulation of the overall level of ambition related to energy efficiency is very important to structure appropriate policy responses. In the lead up to its election in November 2007, the Commonwealth Government articulated a desire to "put Australia on track to being at the forefront of OECD energy efficiency improvement." This statement is somewhat layered; accordingly a high-level energy use target needs sharper definition in order to drive the reformation of a national over-arching energy efficiency framework, and to inform the scale and extent of proposed policy measures in this area. Better information is required by Government as a priority, through research and analysis aimed at translating its statement of intent into a quantifiable and feasible amount of energy savings for which we are aiming, and therefore into clear goals for specific energy savings measures

Szencorp believes that a goal as outlined in the Second Reading Speech of restricting electricity demand growth by up to 2% per year to reach a 20% improvement by 2020 is eminently realistic. This compares to:

- recent EU estimates which set its cost-neutral, technically feasible energy savings potential at more than 20%, which equates roughly to a 1% annual reduction in energy use over the next 20 years (Commission of the European Communities, 2006). Note that Australia is currently much more energy inefficient than the EU and other developed countries, using up to three times more energy per unit of GDP.
- California also has a similarly ambitious target which effectively equates to a 20% reduction by 2020.
- New Zealand recently set in place a comprehensive suite of sectoral targets for energy efficiency, summarised by a reduction in overall energy intensity coupled with a reduction in economy-wide greenhouse emissions to 1990 levels by 2012.

Szencorp believes that a high level energy efficiency target, delivered in large measure by a market based certificate scheme, is an important building block of Australian demand-side

energy policy. It is disappointing to note that development of Stage 2 of the National Framework for Energy Efficiency (NFEE) does not contain any such measure. We note that Federal Government consultation on NFEE Stage 2 to date has involved a single workshop at which Government presented a range of low-level pre-approved measures, without any strategic direction that such a high-level target and market based certificate scheme would provide. Furthermore, industry appears to have no further opportunity to influence the priorities of the NFEE process.

Detailed mechanics of the Scheme as outlined in the Bill

A "white certificate" scheme as proposed by the Bill forms an important high level component of an integrated energy efficiency policy response, alongside regulatory, information and direct fiscal policy measures. Szencorp broadly agrees with the text of the Bill as presented and believes that the VEET model, currently under construction by the Victorian government, provides valuable lessons and is an appropriate departure point for a national white certificate scheme in terms of scheme design. Szencorp's comments on the Victorian Energy Efficiency Target ("VEET") scheme are wholly relevant to this Bill and are at Attachment 2 for your reference, particularly on the inclusion of commercial sector energy efficiency in such a scheme, as well as the use of the Australian Building Greenhouse Rating (ABGR) as a suitable method for deeming or certifying energy efficiency improvements.

White certificate schemes are in operation in a number of countries with promising early experience emerging (World Energy Council, 2008). An Australia-wide market based mechanism/retailer obligation to support energy efficiency (extending to and expanding on the NSW and Victorian schemes) could operate in a similar manner to MRET, as explicitly recognised by the Bill. This will be an effective way to target and provide incentives for energy savings improvements for existing buildings across residential, commercial and industrial applications. Key design issues relate to the workability of including each of the activities which will be deemed eligible. To overcome transaction costs, pre-qualification of certain technologies would be appropriate, for example greenhouse savings from upgrades of chillers and lighting controls can be assessed according to a pre-approved methodology, rather than having to be assessed on a case by case basis for applicability. Special provision, also, should be given to projects which reduce transmission losses and peak demand requirements (e.g. distributed and intermittent generation technologies).

It is difficult for such schemes to be technology neutral, because Government must decide on what qualifies under the scheme; however through work on VEET robust methodologies are currently being developed to ascertain the value of inclusion of a range of particular technologies and activities.

Szencorp wishes the Democrats well in raising this issue with Government through this Private Members' Bill and will be actively advocating for similar broad based energy efficiency measures to be adopted as soon as possible.

Yours sincerely

Peter Szental
Chairman

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ATTACHMENT 2

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18 May 2007

Victorian Energy Efficiency Target Scheme
c/- Department of Primary Industries
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MELBOURNE VIC 3000

Dear Sir/Madam

VICTORIAN ENERGY EFFICIENCY TARGET ("VEET") SCHEME
COMMENTS ON ISSUES PAPER - MARCH 2007

Szencorp welcomes the opportunity to comment on the proposed Victorian Energy Efficiency Target ("VEET") scheme.

Established in 1983 and headquartered in Melbourne, Szencorp group companies are at the forefront of Australian industry in the commercialisation and installation of innovative technologies for sustainable buildings. The Group employs 65 people in Australia and 20 in Southeast Asia. Its core businesses specialise in delivering energy efficiency and waste to energy solutions, water treatment and property development. Szencorp's leadership in and commitment to energy efficiency is demonstrated by its corporate headquarters at 40 Albert Road, South Melbourne, Australia's highest rated green building on both design and operational measures.

Szencorp has worked with the Australian Business Council for Sustainable Energy ("BCSE") in the development of its submission on the VEET scheme. In broad terms, Szencorp agrees with the propositions put by the BCSE in regard to wider scheme design details. Additional comment is provided below, however, in relation to scheme coverage, which is raised on pp. 15-16 of the VEET issues paper with the following issue for consideration:

"Should the scheme cover energy efficiency opportunities outside the residential sector, in its first phase and/or in subsequent phases? If so, which sectors would it be practical to include in the scheme, and over what timeframe?"

Szencorp believes there is no reason to exclude commercial sector energy savings from the VEET scheme in its first phase. The commercial sector has similar potential for cost-effective improvements in energy efficiency, according to National Framework on Energy Efficiency research, and faces similar barriers to improved energy efficiency. Indeed the NSW Government's Greenhouse Gas Abatement Scheme ("GGAS") allows energy efficiency in commercial buildings to be included as an eligible activity.

The Issues Paper focuses on practicability and workability as the criteria under which potential inclusion of this and other sectors could be considered. Szencorp believes the "disadvantages" presented by the Issues Paper for including other sectors can be easily overcome, namely:

1) **Difficulty of defining a threshold for small and medium businesses in a way that is competitively neutral.**
2) **Diversity of the small and medium business sector could increase the administrative costs of the scheme because it would require the measurement and verification of emission reductions achieved through a wider range of energy savings.**

The language of the Issues Paper and in particular its reference to "business sectors" needs some clarification. For instance, point 1) above presupposes that the VEET scheme needs to make a distinction between some energy users and others. However, the key administrative distinction to be made by the scheme is between different energy savings activities. For instance, it is equally as simple to measure the incremental energy savings achieved from installing an energy efficient light bulb in a house as it is in a commercial office or restaurant.

Szencorp considers, therefore, that discussion about "thresholds" by which to decide that business sectors should or should not be included as part of the VEET scheme is largely irrelevant. The VEET scheme is more sensibly applied by building type, as practically all of the energy savings activities which might qualify as eligible emissions reductions of the scheme take place within residential, commercial or industrial buildings. This lack of distinction permeates the Issues Paper; for instance, in Szencorp's view the listing of "eligible implementers" provided in pp.17-18 of the Issues Paper should not list "small and medium businesses (if covered by the scheme)", but "commercial and/or other building owners", regardless of their business sector or size.

With reference to Point 2) above, it is true that inclusion of energy savings for certain activity types as eligible activity under the VEET scheme would increase the scheme's complexity and administration cost. However, as noted there are a number of relatively generic activities such as lighting, heating and cooling upgrades that are consistent with the residential sector, and/or can be addressed through simple deemed-to-qualify provisions under the VEET scheme. This treatment could include base building upgrades of all types, but exclude the vast majority of industrial/factory processes that take place *within* buildings, which have the potential for wide variation between types of energy savings achieved and present risks for overall cost of scheme administration.

Szencorp therefore recommends inclusion of eligible activities in ANY OR ALL of the following building classes, using the Building Code of Australia taxonomy, in the first phase:

	Example of building within this class
Class 1	Residential buildings
Class 2	Apartments
Class 3	Accommodation – Hotels/Motels, etc
Class 4	Single flat in a commercial/industrial building
Class 5	Office
Class 6	Shops
Class 7a	Car parks
Class 7b	Warehouses/storage
Class 8	Factories
Class 9a	Health care
Class 9b	Assembly building, theatre etc, church, library, gymnasium
Class 9c	Aged care facilities
Class 10	Garages or sheds

In this section the Issues Paper also notes the potential overlap with other energy efficiency requirements, namely the Victorian EPA requirements for licensees, and the Commonwealth Government's Energy Efficiency Opportunities ("EEO") program. While regulatory additionality is a minor issue with respect to VEET and the Victorian EPA requirements for licensees, Szencorp notes that additionality is of no practical concern in regard to EEO "requirements", as EEO does not require any abatement or energy efficiency activities to be undertaken. Moreover, VEET's proposed design as a market-based scheme will not directly place obligations on large companies or energy users; rather it will improve the economics of undertaking energy efficiency improvements, which is to be encouraged for all activities, provided administrative cost can be managed. In this sense VEET acts as a complementary, rather than duplicate, mechanism for delivering energy efficiency alongside existing measures commented upon in the Issues Paper.

Further measures to reduce administrative costs of including commercial buildings

In support of Szencorp's recommendations above, further measures are available to reduce administrative costs of the inclusion of additional building types within the first phase of the

VEET scheme. In particular, the Australian Building Greenhouse Rating ("ABGR") scheme gives a simple and effective rating of the greenhouse and energy performance of a building site from one year to the next. The NSW GGAS recognises ABGR as a mechanism for determining offset credits from commercial building energy efficiency, acting in essence as an aggregated "deemed-to-qualify" mechanism for whole building energy efficiency. This approach could be directly emulated by VEET, with the following adjustments:

- Under GGAS, implementers are required to register as an abatement provider for each specific project they do and/or technology they use. This is a significant cost and time issue. It is therefore recommended for VEET that abatement providers should only be required to register once, and the registration allows them to create energy efficiency abatement over multiple projects and markets, subject to standards for monitoring, verification and reporting being met. The initial registration may therefore be more stringent to ensure the ongoing quality of abatement.
- GGAS projects are liable for spot audits which can be very expensive and are an uncapped liability for the project under GGAS. VEET should provide a capped audit fee (say a % of overall savings), with any additional costs to be funded by the scheme.
- Ensuring the longevity of gains made in commercial buildings will be important. Requiring assurance through a "green lease" and/or energy performance contract, both of which provide for minimum performance levels to be upheld over multiple years, will ensure that any energy efficiency certificates generated from commercial building energy efficiency can be substantiated. To this end, Szencorp has proposed a number of working models for improving commercial building energy efficiency to the Victorian Government (refer Appendix 1), which may provide an appropriate or facilitative framework for the consideration of its inclusion in the first phase of the VEET scheme. This proposal is extremely similar to an initiative announced today by the City of Melbourne.

Szencorp is grateful for the opportunity to comment on this important initiative, which will set in place a scheme likely to drive significant uptake of Victoria's enormous energy efficiency potential and serve as a foundation for possible future approaches to this issue nationally. We look forward to further involvement in the development process and would be very pleased to engage with Government if there are any further queries about our views as expressed here.

Yours sincerely

Peter Szental
Chairman

APPENDIX 1

PROJECT PROPOSAL

STATE-WIDE "BUILDING TUNE-UP" FOR SMARTER ENERGY AND WATER USE IN COMMERCIAL BUILDINGS

Background

This project addresses Government's desire to improve the uptake of energy and water efficiency practices in the built environment, and integrates with existing programs to deliver more sustainable buildings. It builds on successful models that have been completed or are underway elsewhere, notably in Adelaide and in the City of Port Phillip.

The Concept

Commercial building owners within a precinct are selected to participate in a building refurbishment program, whereby their building will be

a) benchmarked according to accepted energy and water performance standards;
b) upgraded to a higher standard, with the costs of upgrade recovered through the energy and water savings generated.

The Building Tune Up that was run in Adelaide upgraded ten buildings at a cost of $449,000. This cost was recouped through the energy and water savings generated **within twelve months**.

How the concept would work in Victoria

In the Victorian context, project steps might include:

1) Sustainability Victoria working with DSE's Sustainable Futures team and local government representatives to establish the project as a joint state/local initiative, under the auspices of the Victorian Local Sustainability Accord.

2) Local governments interested in participating could run the project inception phase, that is, to identify willing "building tune up" participants/commercial building owners from their municipality, and to arrange performance benchmarking on their existing sites in conjunction with industry expertise.

3) Partnerships with energy services industry providers would deliver the building upgrades, according to the specified project outcomes. Capital cost of the upgrades

would be financed using either private finance from the energy services industry or sourced from Victorian Government (in either case, likely to be at lower interest rates to what could be privately sourced by building owners). This funding would also allow provision of a monitoring and verification package for each site, which would prove the upgrade results.

4) SV would work to support local government in the provision of marketing exposure/publicity and community recognition for building participants. This could be delivered through Sustainability Victoria awards programs, or in conjunction with other similar/associated efforts e.g. ICLEI's CCP campaign, or the 'Grow Me The Money' initiative.

5) Commercial buildings upgraded and verified savings generated by this program could be deemed eligible abatement under the Victorian Energy Efficiency Target. This is appropriate given that the initiative overcomes the stated key disadvantage of including commercial energy savings under VEET in the first round, i.e. covering the administrative costs of measurement and verification of emissions reductions achieved through different types of energy savings.

6) To close the loop, Councils could also offer to purchase (perhaps at a rate discounted to the market price) and retire the VEET certificates generated by local building owners, thereby assisting the councils in their efforts to become carbon neutral.

Incentives for participation

This program will encourage uptake of energy efficiency in the commercial buildings sector over and above current practice, because:

- Building owners will have part of their project involvement costs covered by Government funding.
- Building owners will have access to finance at reduced interest rates to what they may be able to attract privately
- Building owners will gain public exposure for improving the environmental performance of their assets
- Building owners will access additional income streams through VEET eligibility.

Local governments benefit from participation through

- Meeting CCP milestones (if members of the ICLEI CCP campaign)
- Extending efforts to make their municipality carbon neutral in a cost effective way

- State Government support to bolster existing programs to engage with the commercial sector on sustainability issues

State government involvement

State Government involvement is largely facilitative but, to create the appropriate incentives for participation, will involve providing funding for the project inception phase and to ensure that monitoring and verification meets requirements under the VEET scheme. It is possible that this funding be provided on a revolving basis; i.e. that it is recovered/repaid to State Government through the energy and water savings generated by the program. The extent to which this is done is proportional to the amount of incentive offered to building owners; i.e. if project inception costs are all to be recouped, then longer payback periods will result.

Amount of funding requirement varies depending on the size of each project and the difficulty of establishing benchmarks for participating buildings. A Melbourne Building Tune Up project proposal has been fully developed and costed for Melbourne, which outlines a relatively ambitious project under which a large percentage of buildings are upgraded (i.e. inception costs are high), and ongoing savings are very significant.