

**AUSTRALIAN
ALLIANCE
TO SAVE ENERGY**

2xEP Challenge

Voluntary Commitment/Recognition Program

November 2015

Final Feasibility Report



Thanks

The Board and Staff of the Australian Alliance to Save Energy (A2SE) gratefully acknowledge our colleague Jonathan Jutsen as the primary researcher and author of this text. We also acknowledge the considerable contribution of Patrick Denvir as researcher. The feasibility study and this report have benefited significantly from the involvement and attention of David Malicki, Office of Environment and Heritage New South Wales (OEH NSW); Tennant Reed and Jason Walker of the Australian Industry Group (AiGroup); John Osborn and Bryan Clark of the Australian Chamber of Commerce and Industry (ACCI).

This bulk of this work was commissioned and financed by OEH NSW and undertaken as a component of the Australian Energy Productivity Roadmap and 2xEP Program. The section 'models for governance and administration' was commissioned and financed by the Commonwealth Department of Industry, Innovation and Science.

This work would not have been possible without the exceptionally generous support of the Institute for Sustainable Futures (ISF) at the University of Technology, Sydney, and Energetics. ISF hosts A2SE and the Roadmap project. Energetics provides significant in-kind support, notably through contributions to the project by Jon Jutsen and Anita Stadler..

The views expressed in this text are those of A2SE and are not necessarily those of our supporters and partners. We have taken all care to ensure that data is correct. All responsibility for the text rests with us.

© Australian Alliance to Save Energy 2015
Level 11, UTS Building 10
235 Jones Street, Ultimo, NSW 2007

email: info@a2se.org.au phone: 02 9514 4948
web: www.a2se.org.au abn: 39 137 603 993

Please cite this document as: Jutsen, J. (2015). 2xEP Challenge – Voluntary Commitment/Recognition Program. Sydney: Australian Alliance to Save Energy

Table of Contents

Executive summary and recommendations	3
1. Overview and objectives	7
1.1 Purpose of this assignment.....	7
1.2 What is a voluntary commitment/recognition program?.....	8
1.3 Objectives of the Challenge program.....	8
1.4 The Challenge in the context of a total 2xEP policy suite	9
1.5 Adding Challenges	10
2. Key design parameters	11
2.1 Proposed basic design principles.....	11
2.2 Energy productivity metrics for the Challenge	11
2.3 Energy productivity targets and base year for the Challenge	12
2.4 Reporting and verification	13
2.5 Corporate or division/site level recognition	14
2.6 Alignment with programs in other countries.....	14
2.7 Participating sectors and eligibility criteria	15
2.8 Promotion of C benefits.....	15
2.9 Encouraging continuous improvement.....	15
2.10 Program support services intensity and cost	15
2.11 Program rollout options	16
2.12 Integrating the Challenge with related programs	18
2.13 Time requirements for participating companies	18
2.14 Address concerns that the Challenge may become compulsory.....	18
2.15 Network support	18
3. Program start-up and recurrent running costs	19
3.1 Background data – cost of comparable voluntary recognition programs.....	19
3.2 Program budget – Cost elements	19
4. Models for governance and administration.....	23
5. Funding models	29
5.1 Business-based funding sources	29
6. Value proposition for stakeholders and participants.....	32
6.1 For business.....	32
6.2 Government involvement as a sponsor and implementer	35
6.2.1 Boosting energy productivity	35
6.3 Industry associations:.....	36
6.4 Expected program benefits and costs.....	37



7	Draft Memorandum of Understanding (MoU) for participants	38
	Attachment 1: History of voluntary business programs	40
	Examples of programs over the last 20 years	40
	1. How have voluntary programs performed?	41
	i. LBNL Review of Voluntary Agreement Programs, 2005.....	41
	ii. Greenhouse Challenge Program	42
	iii. SEDA Energy Smart Business Program.....	43
	iv. ClimateWorks Australia – EEO Program reporting	44
	v. ‘Voluntary’ ISO 50001 Programs.....	45
	vi. Context of a voluntary program.....	45
	vii. What do these observations mean for 2xEP Challenge?	46
	Attachment 2. Design aspects and options	47
	Attachment 3. First draft budget detail	53
	Attachment 4: Sources of energy productivity benefits.....	55
	Attachment 5: NSW Companies expressing interest to sign onto 2xEP Challenge	56
	Attachment 6: Industry Growth Centres model.....	57



Executive summary and recommendations

OEH commissioned A2SE to determine the feasibility of establishing a voluntary commitment and recognition program aimed at doubling the energy productivity of business and government operations – the '2xEP Challenge'. A2SE is considering voluntary programs as part of an overall '2xEP' program aimed at doubling Australia's energy productivity by 2030 (from a 2010 base). 2xEP by 2030 will deliver \$20 billion/year of energy savings and some 2.5 times that amount in total energy productivity benefits.

The 2xEP Challenge could play a critical role in the National Energy Productivity Plan (NEPP) as a leadership program by and for business. The timing of this report will allow the Challenge to be considered by COAG Energy Council in December in its first round of policy measures targeted to improving EP 40% by 2030 (from a 2015 base). Both the Commonwealth Government Energy White Paper (2015) and the subsequent COAG Energy Council Statement on Energy Productivity acknowledge the importance of voluntary action by business.

Involvement by governments in a voluntary commitment program can be justified by the need to advance consistent messages to business around energy productivity (EP), assist business to implement actions arising from the COAG Energy Council Statement on Energy Productivity, accelerate the uptake of investments in EP, support additional outreach and engagement for government initiatives, promote business role models, and improve national coordination of efforts to achieve EP targets.

This feasibility report reviews program design concepts, defines key tasks, proposes options for administration and implementation, examines potential funding models, and reports on engagement with key stakeholders including government, industry associations, potential participants, services/equipment providers and international collaborators.

Experience from Australian and international programs has demonstrated that well designed voluntary commitment and recognition programs are motivating for business, galvanise and focus business efforts to gain EP outcomes, and can be a cost effective approach to achieve EP outcomes by harnessing business resources that integrate with existing national programs.

A similar voluntary commitment program for leading global businesses (EP100) is in development and is likely to be launched in the first quarter of 2016. We are exchanging information with the US Alliance to Save Energy and other groups involved in that program in a bid to harmonise targets, metrics and reporting arrangements.

The key findings of this study include:

Objectives: The overall objective of the Challenge is to boost the energy performance of organisations (businesses and government agencies) using a business-led program that attracts involvement by providing a high level of public brand recognition for their efforts and support to achieve EP improvement targets. The program would encourage companies to commit to double their historical rate of EP improvement, and ideally to double their absolute EP by 2030 from a 2010 base year.

Basic principles to underpin program design: To be successful, the program must offer:

- Real value (particularly brand value and bottom line benefit) for participating companies
- Easy access, and 'stickiness' to ensure high levels of retention
- Credibility and rigor, balanced with ease of use and simplicity
- Relevance to participants and easy integration with existing programs and targets
- Consistency of approach over the long term



Targets: We propose offering participants three options for level of ambition and associated recognition that are discussed further on page 13:

Champion	Double energy productivity 2010-2030
Premium member	2.6% p.a. improvement in energy intensity
Member	Report against own target

Reporting and verification: We recommend reporting arrangements that integrate with current business practices. Companies would be required to report progress annually against milestones in corporate annual/sustainability report (or for private companies, in a formal sustainability report, or reported in an appropriate section of their public website). All participants must maintain adequate records to substantiate any claims made, including their ongoing participation at the specific recognition level of the program. We propose that reported data for all participants be collated and assessed annually, and that an annual survey of participant experiences be conducted to allow the program to be regularly refined.

National program: The program should be offered nationally, even if it is initially delivered only in NSW and Victoria. We also propose that the program take account of similar international EP programs with the aim to harmonise basic program parameters to facilitate streamlined participation by multinational companies.

Staged implementation: Due to the lack of familiarity of business with EP concepts, and the effort required to establish a large national program, we propose that it be implemented in stages:

- A pilot program in the first year, aimed at improving business understanding of EP opportunities and recruiting leading businesses who can promote the program to the next tranche of companies. We propose that this small scale ‘2xEP Challenge Leaders Program’ would invite 30-50 organisations to participate, selected because they have achieved energy savings, have established energy/sustainability management information and reporting systems, and established continuous improvement programs. This should include some SME businesses. The focus in year 1 would be to identify the full range of EP opportunities, develop metrics, gain public recognition for participating company achievements, develop case studies of benefits gained, and define/develop support services to best add value to participants. This knowledge would be used to attract the next cohort of businesses to join the program.
- Once the pilot is completed (say 12 months), a rollout program could be launched with a more intensive support program, and the program focus would be increasing participation with the aim to sign up 250-500 companies over a 4 year period.

Program budget: AiGroup in partnership with A2SE has developed an initial budget for the program:

- **Pilot:** It will cost about \$1.2 million in the first year to run a pilot for 30 companies. The budget splits 1/3 for promotion, 1/3 for participant support, and 1/3 for administration. Most of this is fixed cost, so the cost of running the pilot with greater than 30 companies would increase only marginally (e.g. with 50 companies the budget would be approximately \$1.5 million. This budget assumes no financial or in-kind contribution from participants.
- **Rollout:** The estimated cost in year 2 is about \$2.15 million, assuming the program is extended to another 100 companies, i.e. 130 companies in total or \$16,500/participant. The estimated cost year 3 is \$3 million, assuming expansion to 250 companies, while the average unit cost then falls back to



about \$12,000/participant. These numbers are consistent with the actual average costs of similar past programs of \$12,000-\$18,000/participant.

- We propose budgeting an additional \$600,000 over the course of the first 3 years of the program to support outreach and development of networks and support infrastructure by industry associations.
- The cost estimated for first 3 years of the program, engaging 250 companies, is \$6.4 million plus networks and infrastructure to a total of \$7 million.

To give a sense of the value for money, this total cost is of the order of magnitude of the benefits likely to accrue to a single large energy user participating in this program.

Program governance models: All stakeholders agree that the 2xEP Challenge should be run nationally to allow alignment with national organisations. This does not mean that all states and territories need to commit at the start of the program, but it is necessary to have upfront commitment from NSW and Victoria as a minimum. A number of alternative governance and delivery models were considered for the Challenge, the key models including:

1. Commonwealth administration and program management
2. Collaborative Commonwealth/state model, with Commonwealth administration and state government (with industry association) delivery
3. An independent Energy Productivity 'Growth Centre' to administer the Challenge, with delivery as per 2 above. The organisation could be designed to replicate the governance model of Industry Growth Centres, and fits with the existing criteria based on industry/government/research collaboration. A sub-committee of the 2xEP Steering Committee would be a good fit for the required board. This Centre could be established in parallel with running the small-scale pilot in year 1.

Selection of the program delivery model will be based on the principle of leveraging existing infrastructure and core competencies of each organisation to achieve the best and most cost effective outcome. On that basis models 2 and 3 would be favoured over model 1, with administration, coordination, monitoring and verification of the program being conducted by either the Commonwealth (in-house or contracted out), or by an independent organisation. Model 3 is likely to be the preference of business, as it has the additional benefit of being business run and so engenders some confidence that the Challenge will not morph into a regulatory compliance program.

Under both models 2 and 3, delivery functions would be provided by state government agencies leveraging existing infrastructure and programs. Note that the existing capacity to deliver these programs varies greatly, but the program could start with Commonwealth support and NSW and Victoria signing on initially. Other states could join as they build capacity. Note that the 1 year pilot period allows time for other states to sign on. States would deliver the program in close partnership with industry associations that are effective at recruitment, promotion and network support, building on their existing member services. If model 2 is selected, company performance tracking and program review could be done independently through A2SE.

Funding the Challenge: New funding is required from the Commonwealth to initiate the Challenge program and to support it for at least the first four years of operation. State agencies (at least NSW and Victoria) would provide substantial in-kind support by leveraging and extending existing programs, and potentially some limited cash support. In-kind support is also expected from industry associations leveraging their extensive networks, matching Commonwealth cash contribution to support additional committed resources for outreach activities.

OEH NSW proposed that the program be designed to become self-funding within 4-5 years. The benefits of this approach are that it focuses attention on creating demonstrable value for participants, and allows for funding sustainability, independent of government. This report considers various sources of funding for the program, and proposes that the program be designed to be at least 50% self-funding within 3 years.



THE 2xEP CHALLENGE: FINAL FEASIBILITY REPORT

Aiming for 100% self-sufficiency may compromise the ability for the Challenge to encourage companies to establish continuous improvement programs (e.g. based on ISO 51001), and educating businesses about energy productivity opportunities. If the Challenge must fit the Industry Growth Centres model, it would need to achieve commercial independence in 4 years, and this should be feasible, though a longer run-up period would be desirable.

Program performance criteria: A set of performance metrics will be developed for the rollout phase of the program, which will include participation rate, EP improvements achieved, and participant satisfaction, as well as secondary criteria like measures of program exposure (including media coverage).

Broader resource productivity and carbon mitigation: This program is currently designed with a focus on energy productivity. However, there is strong merit to address broader resource productivity with this program including water, waste, and possibly also materials. This is also in line with the resource productivity focus of State programs in NSW, Victoria and South Australia. Further, the likely increase on focus on carbon mitigation over the next 3 years will lead to some companies making voluntary commitments around measuring and reducing carbon emissions. As a result, it is recommended that early consideration be given to adding optional voluntary targets for improvement in water and carbon productivity and reduction in waste.

Next steps: Given the solid and encouraging support from governments at Commonwealth and state levels as well as from industry associations and private businesses, there is a good prospect that a proposal to COAG Energy Council at its December meeting would be supported subject to Commonwealth budget support. Note that the OEH NSW has shown leadership in this area by volunteering to double agency energy productivity by 2030.

To maintain momentum, it is highly desirable to gain agreement to proceed with the program at the December COAG Energy Council meeting, so that the pilot could be initiated in early 2016. Pilot participants could be recruited from then on, so the program could be formally launched in July 2016, with a recognition event involving 10-20 organisations whose CEOs would sign their commitment MOU's at high profile event. (Note that the EP100 international program is likely to be launched in February 2016).



1. Overview and objectives

The purpose of this report is to assess the feasibility of establishing a voluntary commitment/recognition program for business and government agencies. This '2xEP Challenge' program would encourage participants to commit to the ultimate goal of doubling their energy productivity by 2030 (from a 2010 base year). Central to the idea of a 2xEP Challenge program is recognition of the leadership and achievements of participating organisations. We have drawn from the experience of successful past and current programs based on this principle. (See Attachment 1).

1.1 Purpose of this assignment

This assignment aims to provide initial program design concepts, define key tasks, propose options for roles and responsibilities and funding models, and engage with key government and industry stakeholders to secure their support in the development, resourcing and delivery of the program.

The key objectives of the work are to determine how a 2xEP Challenge program could be established that would provide business and government leadership around doubling energy productivity by 2030, and more specifically:

1. *Define and gain agreement on key objectives of the program and success criteria.*
2. *Provide design options for core elements and initial budget estimates for running the program.*
3. *Engage with appropriate organisations that could ultimately commit to deliver/support the 2xEP Challenge program in NSW and other states. Determine the value proposition for participation for key participants and stakeholders. Gain commitment in principle from the key potential stakeholders likely to support/deliver the program.*
4. *Propose and discuss contributions that would be required (including government seed funding and sustainable funding model) from each party to make it work.*

To date, key stakeholders engaged include the following and inputs from these exchanges are included in this report:

- Office of Environment and Heritage New South Wales (OEH NSW). David Malicki key contact. OEH is supportive of the program in concept, providing administration and funding models are suitably resolved.
- Australian Chamber of Commerce and Industry (ACCI). John Osborn and Bryan Clark. Supportive (and canvassed member organisations who are supportive). Conducted follow-up review meeting on July 8. We also had direct discussions with VECCI (supportive), PACIA (supportive) and phone with AFGC (concerned about getting traction based on EEIG experience), NSW Business Chamber (broadly supportive). ACCI to run a workshop with members.
- Australian Industry Group (AiG). Tennant Reed and team. Supportive. Workshops and meetings and assisted with bottom up budget and metrics.
- Commonwealth Department of Industry and Science. (Sarea Coates and team). Supportive of concept - and provided input on governance models.
- Department of Economic Development, Jobs, Transport and Resources, Victoria (Sharn Enzinger and Mark Feather) expressed interest in the program. They are at early stage of development of their energy efficiency/productivity program and will publish their new EE/EP strategy in the first quarter of 2016. They may be willing to participate in a launch in the New Year but have limited resources and budget and would need to utilise Sustainability Victoria program infrastructure.
- Sustainability Victoria – Met with Stefan Preuss and received feedback from him and Katrina Woolfe (currently on secondment to Ecodev).



- Department of Energy and Water Supply, Queensland – met with energy policy staff (headed by Gayle Leaver), and environment staff and they are supportive in concept, but they are at an early stage in development of their programs following the change of government and have very limited resourcing and existing activities are largely focused on renewables and EE in agriculture.
- Initial phone meetings were conducted with representatives from South Australia (Rebecca Knights) and Western Australia (Justin Ashley) governments and they have been provided with the previous draft of this report.
- ClimateWorks Australia – Wei Sue and Amandine Denis input provided and incorporated.
- Phone meetings with Alliance to Save Energy (USA) and their collaborators (in USA and UK) on the EP100 program (led by the Climate Group).

1.2 What is a voluntary commitment/recognition program?

Voluntary commitment and recognition programs encourage businesses to participate and achieve outcomes through one or a combination of these mechanisms:

- **Deliver public recognition for participation.** Generally this would entail significant positioning and branding opportunities for participants through promotion of participating companies and their ongoing achievements. This encourages companies to step forward, demonstrate leadership and, in return, build business value through public recognition for strong sustainability outcomes. The nature of recognition and publicity is discussed later in the paper.
- **Create a strong business case for participation.** Achieving 2xEP by 2030 (from 2010 base-line) delivers substantial reductions in energy costs and/or increases in economic output. Demonstration of results achieved by early participants in the program, through case studies, encourages other companies to participate.
- **Provide services to support achievement of energy productivity increases** that are valued by businesses.
- **Provide carrot or 'stick' to encourage take-up.** To gain the greatest level of participation and achievement of specific outcomes, these programs offer incentives for participation – or disincentives for not participating (e.g. in Germany, the business program has been highly successful in recruiting companies because the associated tax benefit provides an 8 week payback on the investment required for implementation of ISO5001). **Note that such approaches are not considered in the scope of this work and are not anticipated.**

1.3 Objectives of the Challenge program

Issue: The overall objective of the program should be to boost the energy productivity performance of businesses (and also government agencies) using a business-led program. The program would propose that companies aim to double their historical rate of EP improvement and ideally achieve double their EP by 2030. But within this context there are different ways the program could be focused.

Prioritising Challenge Objectives:

- a. Providing business leadership, by promoting and documenting activities and achievements of companies that are leaders in the field and are setting the pace, to attract others to act. This is particularly important in an initial pilot program that will focus on case study development and pilot businesses leading the way for the next tranche of participants. The key incentive provided for companies to participate in the program at this stage is positive corporate PR through the recognition program. Once CEO's have signed the MOU, this provides top down internal policy



- drivers for action. This can be reinforced by conducting a workshop for senior management to promote the alignment of program benefits with the company's core values/priorities.
- b. Educate and inform companies about energy productivity opportunities and build competency. (This could include building awareness so that EP opportunities are captured at the critical time of major plant investment). This involves support with information and training, disseminating convincing case studies, with businesses telling their stories, across the diverse types of operations and business sizes that will participate in the program, supporting companies to identify EP opportunities, developing approaches to business case development and encouraging implementation of continuous improvement practices.
 - c. Achieve strong participation in the program in the rollout phase. Financial incentives would assist to drive participants to the program, but there is no immediately obvious way to provide these in a budget-constrained environment.
 - d. Deliver strong benefits and value from the program. This is best achieved by effective account management and significant levels of customised support to assist companies to gain the greatest benefits from the program. Surveys by OEH, and experience of the SEDA program indicate that clients perceive they get the greatest value and derive the most savings from customised support and 'hand-holding'/guidance.
 - e. Documenting and proving program benefits. Excessive focus on proving results and a requirement for extensive and consistent measurement and verification (M&V) and reporting can be a significant deterrent to participation, so this needs to be pragmatically balanced with making it easy to participate.

Recommendation: We recommend a model where different objectives take centre stage as we progress through a staged rollout:

- Initial primary objective in pilot phase is to improve understanding of EP opportunities and provide early leadership e.g. by starting with a selected 'leaders' program (focus on objectives a. and b.) and then business EP leaders can sell to other businesses.
- Once this is accomplished, the key objective becomes high participation rates (objective c.)
- In a later phase, the focus should move to achieving, documenting and verifying energy productivity outcomes (focus on objectives d. and e.) and continue to enlarge the customer base, involving extra focus on reporting, and (if not supported by complementary programs) will require a comprehensive support program, ideally reinforced with financial incentives.

This also means obtaining explicit understanding from all parties that there will not be comprehensive, consistent and externally verified datasets proving cost-to-benefit ratios in the early years of the program. We do however recommend that quantitative and qualitative information be collected from published participant reports annually, and also that participant satisfaction survey data be collected annually, to assess and demonstrate the benefits of the program against the initial criteria.

1.4 The Challenge in the context of a total 2xEP policy suite

The ideal role of a voluntary commitment program is as an important element of an integrated suite of programs to deliver an energy productivity target. The role of the Challenge should be to provide recognition and incentive for leaders to demonstrate best practices and show what is possible. It is unrealistic to expect a voluntary program to do the bulk of the heavy lifting for the NEPP, without substantial financial incentives (carrots) and/or penalties (sticks) to drive companies to participate in the program and implement identified measures. These may require legislative change and/or funding commitments.



1.5 Adding Challenges

This program is currently designed with a focus on energy productivity. However, there is strong merit to address broader resource productivity with this program including water, waste, and possibly also materials. This is also in line with the resource productivity focus of State programs in NSW, Victoria and South Australia. Further, the likely increase on focus on carbon mitigation over the next 3 years will lead to some companies making voluntary commitments around measuring and reducing carbon emissions.

As a result, it is recommended that early consideration be given to adding optional voluntary targets for improvement in water and carbon productivity and reduction in waste.



2. Key design parameters

2.1 Proposed basic design principles

- Adds value for participating companies: 2xEP Challenge must create significant value for participants and not add unnecessary complexity. It should provide a positive experience throughout, and be cost effective (i.e. generate substantially more benefit for the participant than the direct cost and value of time invested).
- Easy access and 'stickiness': The program needs to have few barriers to entry and CEO sign-off, but the benefits and public exposure of commitments make it difficult or undesirable to leave.
- Credibility and rigour balanced with ease of use: The program needs a balance between requiring sufficiently strong and measurable commitments to demonstrate real progress beyond BAU and avoid 'greenwashing' claims, but with a need gain widespread participation: Targets must be perceived to be achievable, expressed in terms/metrics which are commonly used, and monitoring and reporting must be flexible enough to gain broad participation.
- Relevance: The scheme needs to be designed sufficiently flexibly to align/support companies of different size, sector, and maturity of business systems. The Challenge also needs to be harmonised as much as possible with internal metrics and targets, and other local and international EP programs and carbon programs.
- Simple and compelling messaging and effective marketing: The program must be easy to communicate, easy through a campaign that leverages sponsor, participant, and government networks to drive awareness and participation.

2.2 Energy productivity metrics for the Challenge

Issue: The metrics applied should be readily measurable/readily accessible, relevant to the business, and not confidential (so that they can be publicly released in standards reports including annual reports). Importantly metrics should realistically track trends in energy productivity performance (which is as or more important than absolute metrics). Energy (and carbon) data for larger companies are publicly available through NGERS.

Options: There are three basic options that are not mutually exclusive:

- Energy productivity metric – i.e. value created/energy consumed (e.g. \$ sales (or revenue)/GJ). Participants should have flexibility in selecting a metric numerator that is meaningful to the business. The challenge with \$ sales data is that it is impacted by market fluctuations in product sales price, and there can be an extended time to access numbers (due to need to include inventory movements). Using 3 year moving averages can dampen volatility but does not resolve the problem. Note also that some companies may have confidentiality issues around the numerator in EP (sales/revenue \$), though for public companies this data is mostly on the record.
- Energy intensity metrics – i.e. unit activity/GJ (e.g. tonne/GJ). Again participants would have flexibility to set the numerator. (That may mean using multiple metrics in different divisions of a business, and if there is no feasible activity metric, then a scale metric like m^2 could be used). These metrics are also far from perfect as they are impacted by changes in product mix and throughput and are challenging for multi-product operations.



- Track major improvement projects implemented and their energy productivity impact, as this may be more meaningful to track the progress of companies in transforming their businesses.

Recommendation: No metric is perfect and it is recommended that participants collect and report all three types of measure to provide the most meaningful indication of progress. It is proposed that participants be provided with options of using either one of the key metrics as the primary one for tracking against their target. (See next section).

2.3 Energy productivity targets and base year for the Challenge

Issues: We propose to use a 2010 base year in line with the other elements of the 2xEP program. There will thus be credit for early action and leading companies may welcome immediate public recognition for their achievements in the period from 2010 to 2015. Flexibility will be offered for the choice of base year used (between 2010 and 2015) to minimise any perceived barriers for joining. (Use of a base year before 2010 may be considered in exceptional circumstances where it can be proven that the company has invested in substantial early action).

Improving energy productivity in business is a much larger opportunity than just improving energy efficiency, though that is an important element. What this means is that for most companies there are much larger productivity improvements available from using energy more effectively than simply a reduction in the energy used per unit of activity. By way of example, the illustration in Attachment 5 demonstrates the four major classes of savings for the manufacturing sector – i.e. firstly energy savings, including co-benefits from energy projects, like maintenance and reliability benefits (often not well measured and attributed to energy projects); secondly, savings achieved from applying an energy focus to broader productivity improvement initiatives and the supply chain; thirdly through a change in business model involving major process change and innovation (e.g. 3D printing vis forging a component), and finally measuring environmental value from EP (like C savings). There will be some education required over the course of this program about these concepts and metrics for measuring energy productivity.

All reductions in energy use per unit of activity should be covered by this program, as well as all co-benefits of 'energy' projects including from reduced maintenance costs, labour costs, increased throughput and improved plant reliability.

Options: The key options are to have a single or multiple levels of recognition, and fixed or flexible targets/rates of improvement.

Recommendation: We propose that companies be given three options for EP/EE improvement by 2030, with different levels of recognition for these different levels of aspiration.

1. Doubling energy productivity by 2030 (from 2010 base). This is the premium target – and requires 3.5% annual EP improvement from the 2010 base year. This is challenging to achieve over a 20 year period solely from energy savings, so it will be important to educate companies about the larger co-benefits from energy related projects which they should be capturing with their EP metrics. Companies that commit at this level could be denoted 'champions'. These companies would be the only ones eligible to use the 2xEP Challenge logo.
2. A specific annual improvement in energy intensity. We propose a rate of 2.6% annual improvement in energy performance to align with the target of the Sustainable Energy For All program (based on doubling the historical global rate of improvement). This rate aligns with the proposed 2nd tier of the multinational voluntary program and with the 40% improvement (from 2015 base) proposed as the EP improvement target in the Energy White Paper. Many companies may, in fact, find it easier to attain 2xEP than this option, but option 2 will be more immediately understood. Companies that commit at this level could be called 'premium members'. They will have the option to switch to the "champions" stream at any time by modifying their MOU.



3. Companies could volunteer their own target to align their aspirations with existing internal targets and/or align with international corporate ambitions. They could also select a base year between 2010 and 2015 for their reporting. Importantly companies would be asked to set a target demonstrably above BAU and their historical trend line. They would be allowed to track performance annually against their own annual milestones (proposed at the beginning of the program), and have the ability to adjust their trajectory by demonstrating how they will get back on track if they are underperforming. Companies that commit at this level could be called 'members'. They will have the option to switch to the other streams above at any time by modifying their MOU.

SUMMARY

Champion	Double energy productivity 2010-2030
Premium member	2.6% p.a. improvement in energy intensity
Member	Report against own target

Note that the OEH NSW Sustainability Advantage program has 'gold', 'silver' and 'bronze' recognition levels based on a set of deliverables around participating in specific activities offered by the program and achieving specified levels of development in business systems, which is another way of providing different levels of recognition. Note also that Sustainability Victoria observes that companies would prefer recognition programs to be national in order to best accommodate the corporate entity.

2.4 Reporting and verification

Issue: It is a requirement to balance genuine confidence in the credibility and rigour of the program (and government interest in collecting data for analysis and assessment of benefits and costs of the program) with the need to provide easy access for companies to participate without additional and burdensome reporting requirements which are not perceived to add value to their business. There is a negative legacy from the EEO program, which has left some companies particularly sensitive about being required to report energy achievements in a specified format that does not align with their existing processes.

Options for reporting EP achievement:

- 1 For the reasons above, we do not recommend the option of requiring annual reporting on a 2xEP Challenge website in a standard format, publicly available, with formal analysis and verification process for all participant data.
- 2 Allow companies to externally report progress each year in either their annual report or their corporate sustainability (CSR) report, so it integrates with existing company systems and practices. This is both more desirable than option 1 from a company point of view, and also exploits the accuracy requirements placed on annual reports without the program having to impose rules, and so substantially reduces the cost and complexity of participating in and running the program. On the other hand, it reduces the availability and accessibility of consistent data to track the program and for governments to understand the progress and needs of companies in their EP improvement activities.

Note that there will need to be a specific reporting requirement for private companies that do not publish reports externally.

- 3 Do not require any specific external reporting, but require that companies commit in their MOU to maintain sufficient records (with at least annual frequency data) so that they can be audited at any



time on claims they make about their EP improvements. Maintaining audit accessible data would be a requirement for option 2 as well.

Recommendation: We propose that option 3 is used for ordinary members, but option 2 is required (as well as access to auditable data) for premium member and champion status. In this option we recommend allocating funds for collating information from public reports for annual analysis and progress review as well as for conducting annual surveys of customer experience to allow regular enhancement to the program to improve customer value.

We propose interim milestones for program review (including company progress review and verification audit) at 3-yearly intervals so that there will be five reports in the life of the program through to 2030.

Consideration should also be given to how companies that fail to meet their own targets at milestones will be treated – the best approach is for repeat offenders to be demoted in the program to the lowest level of recognition or expelled from the program.

Note that A2SE recently had discussions with CDP (formerly the Carbon Disclosure Project) about the potential to partner with them, and about providing a data collection form specifically for the Challenge that could be sent to Challenge members along with the CDP annual survey.

2.5 Corporate or division/site level recognition

Issue: There may be cases in which organisations would seek to implement the Challenge program only at a single energy-intensive site or a division.

Recommendation: We propose that commitments and recognition be at corporate level. However, we also support having the flexibility to support commitment and recognition at an individual site or division if it meets a minimum energy use threshold, and if there is a good justification – e.g. very distinct type of operations compared to the rest of the business – e.g. for large corporations like BHP Billiton where a single business division (like iron ore) could be considered as the reporting entity under the program. We propose that this be the exception rather than the rule as we expect most businesses and government agencies would prefer to be recognised corporately, and for governments to be recognised at department or agency level.

2.6 Alignment with programs in other countries

Issue: Other countries are developing EP improvement programs and we should align with these for the benefit of international businesses – particularly multinational businesses that sign onto international programs and have Australian subsidiaries or operations.

There is a plan to implement an EP100 program internationally (EP100 = 100% improvement from 2010 base = 2xEP) with support from the [US] Alliance to Save Energy, and is currently in design. EP100 is likely to be administered by The Climate Group in collaboration with the 'We Mean Business' coalition and funded by ClimateWorks Foundation (in concert with other funders). It is likely to launch in February 2016, potentially at the same time as the 2xEP Challenge pilot could kick off.

Recommendation: We continue to exchange information with the EP100 design team with the aim of having the two programs compatible and comparable in terms of targets and metrics.



2.7 Participating sectors and eligibility criteria

Recommendations: The program should ultimately be open for all business and government energy users. In the initial pilot phase and perhaps the first year of the rollout it is likely to be the best fit for the manufacturing sector and also the mining and resource extraction sectors. Company size or size of energy spend is not a key criteria, but rather company culture is the key. Membership will be largely self-selecting as a commitment from the top level of management is significant, essential. Later, fees will be charged for participation and that may also sort out some less committed companies.

We propose that Commonwealth and state government agencies be invited to participate. The benefit is both gaining government 'buy-in' and commitment to the success of the program, but it also has a very important demonstration effect – government leadership says to business we are only asking you to do what we are already committed to do. By way of example, OEH NSW has established a doubling energy productivity by 2030 target. Details can be found in the *OEH / EPA 2015-2020 Sustainability Strategy*.

2.8 Promotion of C benefits

Issue: It is likely that a 2xEP Challenge program could be launched shortly after the COP21 meeting in Paris in December 2015.

In light of the recently announced Commonwealth Government target to reduce greenhouse gas emissions by 26-28% by 2030, it is likely that EP improvement will be regarded as one of two main contributors to emissions reduction; the other being renewable energy supply (which currently does not have universal appeal). Modelling by Energetics shows that 2xEP could deliver 40-45% of the 26% target while contributing to economic growth. As a result it may become desirable and politically acceptable to both sides of politics to include C reduction reporting in the 2xEP Challenge program.

Recommendation: Design the program to allow the option for companies to report carbon productivity in addition to energy productivity. This would not be a requirement when the program is initially launched as it may make the program overly complex or/and discourage participation.

2.9 Encouraging continuous improvement

It would be desirable for a voluntary program to encourage the implementation of continuous improvement programs particularly ISO50001 (or ISO14000 with a strong energy focus), but it is not proposed to make this a requirement for participation at this stage as it may deter companies from signing on to the program.

2.10 Program support services intensity and cost

For simplicity of modelling we considered running these programs at two broad levels of intensity of tailored service and support. There is no room for skimping on public recognition as this is a key C-suite driver for participation and experience demonstrates that this element needs to be maintained at a very high level of quality and professionalism for the success of the program.

- Low level support: This aims at lowest cost implementation and relies on voluntary action and initiative from participating companies. This option relies almost entirely on linking companies with existing support programs (which may be modified to better align with the program), and would rely more on the PR benefits of the program to retain members than on the added services. It would be focused on participation rather than proving benefits.
- High intensity support: Another approach would be to design a program focused on achieving proven savings. This approach would have a high degree of 'hand-holding' for participants and customised



services (by way of example, the SEDA Energy Smart program offered consultants as contract energy managers on a 'flat fee + success fee' basis – and they had to prove the savings so had a high incentive to get the companies to verify the savings achieved). It would also feature a requirement for formal reporting and verification, and a high level of support services. This program would have personalised/customised account management to support delivering documented and verifiable EP benefits.

The recurrent cost of an effective high intensity program could be a factor of 2-3 more expensive than the lowest intensity program. Again the cost will also be strongly impacted by the availability of existing state-based industry association services and staff time that can be packaged into the delivery of support activities.

The two options could be offered at different price points (e.g. as in Sustainability Advantage), and allow participants to decide what they want.

2.11 Program rollout options

Issue: Establishing a successful 2xEP Challenge program raises some issues additional to those faced by past voluntary programs (e.g. Greenhouse Challenge Program or GCP, Energy Smart Business or ESB). These past programs were centrally administered by governments, offered substantial support to participants, and were funded consistently 5-7 years at between \$2 million and \$5 million each per year.

The 2xEP Challenge has been posed some unique design parameters such as:

- The current OEH NSW proposition is for shorter-term funding from government and a rapid progression to a self-funding model
- The top 2xEP target asks for higher levels of savings over a much longer timeframe than other programs (though EP improvements may be easier for many companies to achieve than EE targets).
- There will not be any compulsion or direct financial incentive to participate.
- EP is not yet well understood – the term is new and the metrics and methodologies are being established – so some education may be required to get companies on board.
- EP and the 2xEP Challenge encompass a broader range of business features that can boost energy productivity in addition to energy efficiency (such as supply chain efficiency, capital and capacity improvement, process optimisation and lean techniques) that have traditionally not had a specific energy focus.

Options: We considered a range of options to deal with the level of development of energy productivity understanding and the need to ramp up delivery of services and infrastructure.

Recommendations: We propose that a phased program be utilised, with an initial small scale 'leaders' program being the forerunner to a full rollout program, to increase the chance of success. With this model we would start with the leaders program involving companies who have solid energy management and continuous improvement programs in place. Direct support would be focused on extending their understanding and identification of broader EP opportunities. This pilot would be used to develop case studies and educate the market and use the leaders to engage the next quintile of companies into the program as the program rolls out in the second phase. Although it is expected that the services for the rollout phase will initially be largely repackaging of existing services in NSW and Victoria, the use of the lead-in leaders program also has the benefit of allowing more time before additional support services need to be delivered, and more substantial funding to be budgeted.



- 2xEP 'leaders' program, focused on harnessing the experiences of invited leading companies in energy and sustainability management (e.g. the top 'quintile' from the ClimateWorks EEO study), particularly those who are improving the broader energy productivity of their business.

It is proposed that this phase be treated as a pilot program to engage leading companies, provide them with free (or 50/50 funded) services to identify the full range of EP opportunities and develop case studies. The incentive for these companies to participate will largely be about reputation and brand. It will be promoted to CEOs based on substantial publicity being offered to recognise efforts and achievements. The pilot would leverage their experiences to increase the literacy and awareness (and branding) of EP and improvement opportunities. Program activities would focus on EP opportunity identification and quantification, case study development, networking, and workshops/seminars where pilot business leaders would sell the program to other businesses.

The pilot program would be focused on companies already reporting through NGERs and/or with well-established energy reporting and management systems, and ideally there would be a range of company sizes.

It is proposed that the following support services could be offered to pilot participants:

- ❖ Recognition. This is likely to be the key driver for CEOs to participate in the pilot program. It must thus be substantial and specifically committed in advance.
- ❖ Initial invitation-only half-day free of charge workshop on EP principles, metrics and opportunities.
- ❖ A diagnostic tool to define progress in their business systems to address EP and identify gaps (budget 1 day of consulting including documentation and feedback).
- ❖ Support for the development of suitable EP metrics, establishing their baseline and a tracking process (budget 1 day consulting support time)
- ❖ Support for an 'energy productivity scan' at an energy intensive site. This scan would involve the management team and technical staff in facilitated workshops and brief site investigations to define the full range of EP opportunities (budget for 3 days of consulting – 2 days on-site and 1 day for budget costing support and documentation).
- ❖ Case study development and presentation on short video as well as web-based documentation.
- ❖ Conduct site visits and workshops for business leaders to pass on the experiences of the pilot project to other companies.
- ❖ Review of client results and benchmarking to provide some level of competitive tension?
- Full rollout program. Once a successful pilot is completed – say over a 12 month period – the program would move to the recruitment and rollout phase.

The rollout would initially be focused on 'fast following' users who already report under NGERs or have existing good quality energy reporting.

This would require the full range of typical voluntary commitment program elements (recruitment, CEO signing an MOU, account management, promotion/recognition, reporting/verification, and extensive support services such as education and training, assistance with targets/metrics,



networking, and facilitation of links into other programs. In line with past programs, it is expected that 250-500 participants could be recruited over the first 3-5 years.

Important elements of the rollout program would be establishing business networks, in which business can be brought together to share experiences and support each other. In addition, and particularly if partners of the program from energy services and equipment providers are expected to pay to participate, there would be value in running 'market' workshops where energy users and services and equipment providers are brought together to facilitate the use of these technologies and services energy using companies.

2.12 Integrating the Challenge with related programs

There is need to ensure the program links as seamlessly as possible with other resource productivity and waste management programs. These include

- Smarter Resources (materials optimisation), Sustainability Victoria
- Sustainability – (energy, waster, waste...), OEH NSW
- Enterprise Connect/EIP lean manufacturing programs (but maybe not too much overlap with target client size – as EIP targeting \$2-\$100 million turnover per annum)
- Other broader manufacturing productivity/skills training/innovation programs

It should be possible to integrate with these programs as these other benefits could be captured and reported as EP benefits. Links should be made to other agencies and broader productivity programs that may have an energy focus).

2.13 Time requirements for participating companies

During the detailed design of the program (and refined in the pilot), it would be valuable to develop an estimate of the resource requirements for participants – mainly investment of time of people at different levels of the organisation – to engage in the program. This will be a common question that should be addressed in advance and included in promotional material so companies have a realistic expectation of what is involved.

2.14 Address concerns that the Challenge may become compulsory

In discussion about the program some companies have expressed concern that this voluntary initiative could morph into a mandate over time or that a commercial penalty could be linked to the program to require more substantial reporting or force companies to implement measures identified. This is clearly not the intent of the program, and thought should be given to how such assurances might be provided. Administering the program through an independent, non-government body would be one potential approach.

2.15 Network support

One of the initiatives that should be incorporated into this program is close alignment with state-based implementation agencies and industry associations to build business support networks. These regional/cross industry/or professional peer-to-peer linkages have proved invaluable to exchange best practices, build confidence and support progress. In Germany these networks have been formalised and are extensive. We see the role of industry associations being critical in this function in Australia. Sustainability Victoria has, for example, been working closely with associations to fulfil this function.

This is a particular issue for Australia where there is no formal or informal energy managers' network and some consideration could be given to this program supporting such a network – ideally using the existing



infrastructure of an appropriate industry association. In New Zealand for example there is a thriving energy managers association which is part funded by government grants.

3 Program start-up and recurrent running costs

3.1 Background data – cost of comparable voluntary recognition programs

The information on programs such as GCP, ESB and EEO appear to indicate that costs were in the range of \$8,000 to \$14,000 per participant per year including all costs of running the program and publicity. This is outlined in the table below. In \$2015 this equates to some \$12,000-\$18,000/participating company.

Program	Features	Participants	Annual Funding Estimate	Cost per Participant
Greenhouse Challenge	Voluntary, information, commitment, recognition, reporting, verification	350-400	\$27.1m in 5 years = \$5.42m/year	\$12-14,000 per year
SEDA Energy Smart Business Program	Voluntary, information, commitment, support manager services, recognition, reporting	250 est.	\$91m total over 9 years, assume 33% to ESB = \$3.37m/year	\$13,500 per year
EEO	Mandatory, information, reporting, verification	250-300	\$2.2-3.9//year from 2004-05 to 2008-09.	\$8-14,000 per year
Range				\$8-14,000/year

The way we have designed the pilot program, it has quite intensive recognition and support activities so the \$/participant numbers for the historical programs are not a good guide to the cost of the pilot stage. However, the bottom-up budget cost developed for the rollout program is consistent with past program costs, as illustrated later in this section.

In all historical cases funding was sourced almost entirely from governments, although equipment and service providers were asked in the SEDA scheme to fund events where they were linked up with customers.

Note also that there is now a greater availability of state-based government and industry association expertise and services in energy management (at least in NSW) than was the case when the other comparable programs were implemented. The provision of support services for the Challenge can now be linked with existing services being delivered by OEH NSW in NSW.

3.2 Program budget – Cost elements

3.2.1 Recurrent Costs: Recurrent costs will also be a strong function of the design of the program and will include:

- **Recruitment.** The leaders program will need a different recruitment methodology than the main rollout. It will be done through a letter of invitation from the relevant Minister(s) to the CEO, a



senior level follow-up phone call to the CEO, and high level contacts through to contract signing. The rollout program will use marketing, direct contact from, for example, OEH NSW and the NSW Business Chamber and AiGroup and its affiliates to a pre-qualified subset of their memberships.

- **Entry support services** – These are account management services associated with participants entering the program, including assisting companies to set the most appropriate EP target and base-line, establishing reporting process, and registering in the program.
- **Participant administration** – Tracking companies' needs and progress, and provision of account management support. It is worthwhile (and valued by participants) to have a case officer associated with each participant to guide them through the program and ensure that they are getting the greatest value through support services. The amount of time committed per participant is a function of program design. With very large companies it is likely that in the first year a case officer could deal with 10 national customers after the start-up phase, but again it depends on how hands-on the program is. This role could reside with industry associations and/or state government agencies.
- **Promotion of participants** – It is expected that this be a significant activity and is likely to be the major drawcard for companies that sign on initially i.e. as leaders. This could typically include:
 - Advertising (more advertorial) of case studies and achievements and promotional case study videos.
 - Awards (ideally largely integrated with existing activities – in NSW we now have the OEH Energy Productivity in Action awards night),
 - Use of the 2xEP logo by leaders committed to the 2xEP target,
 - Office plaque for participating and awards,
 - Minister joining and recognition meetings – normally launch and awards night would have CEOs with the relevant Minister(s)
 - News articles as well as radio and TV news,
 - Use of social media to promote company achievements.
- **Delivery of support services** - Experience from previous programs shows that participant outcomes and satisfaction are increased with an enhanced level of 'hand-holding', networking, and support services. These elements need to be well integrated with existing offerings in each state, but ideally there would also be an offering of premium level services for enrolled Challenge participants. In addition, specific services relating to training and workshops to assist in building capability to implement all aspects of the program and to understand and implement energy productivity programs and projects are valuable, as are development of case studies and support materials for each subsector.

Note that it is proposed to run at least one session with senior management and operations/energy managers to help businesses identify energy productivity improvements for the business and to review the value proposition for the business. This is to overcome the generally poor understanding about the value proposition of energy productivity by senior commercial managers. We want to ensure that this program, unlike most energy management programs is not focused on technical managers but on senior business managers and the total value proposition or business case including capital, labour and environmental (and C) benefits.

- **Reporting and verification.** This task could be as complex as having a formal reporting framework that requires participants to complete web-based forms or, at the other extreme, having no prescribed reporting method but only an ability to audit at a time of a major milestone or as a sample of public claims. We have recommended something closer to the latter, particularly when the program starts as this eliminates a large initial workload.



We still recommend that a budget is allocated for annual collation (from company public reports or private company direct reporting) and processing of organisation performance against milestones and aggregated findings. It is also recommended that there be an annual survey of participants to assess how the program could be enhanced.

- **General marketing** of the program (including case study development etc) and education on EP. This marketing can be distributed through state-based agencies and the industry associations, supplemented by some articles in relevant media.
- **2xEP Challenge website** with links to local support programs and international 2xEP programs. It would be worthwhile having a specific website linked to all stakeholder sites to provide all the information required to support companies to participate and to promote their successes.

3.2.2 Start-up costs: There will be start-up expenses for the program, the nature and extent of which will depend on the model selected (and will need to be properly costed), but likely include:

- Detailed program design and gaining agreement on the operation of the program.
- Development of all program documentation
- Development of website.
- Development of web-based forms for submission of registrations (and for submission of EP data and processing of that data).
- Development of all promotional materials, and design of the company recognition program and all its elements. These should include high profile signing and recognition for action events – at the beginning, and then every 6 months until the program is well established, **Note that some of these elements should be integrated with existing activities to reduce cost and improve effectiveness** e.g. awards ceremonies – there is no need for starting anything new here as the awards can be integrated in NSW with EPIA, Green Globes, Banksia awards, NSW Business Chamber industry awards, EEC awards, awards planned for the 2016 Summer Study on Energy Productivity, or several other ceremonies potentially.
- Design/links/packaging of initial support programs. It is expected that on day 1 these would largely be a repackaging of existing energy programs (and maybe some changes in terminology and messaging), but some additional training programs will likely be required to specifically address:
 - EP productivity opportunities
 - EP metrics and setting up baseline and setting targets.
 - Linkages (and potential modification to include an energy focus) of industry programs e.g. lean manufacturing, training/capacity building and industry innovation programs).
 - It is proposed that the Challenge also organises for the collation and publication of information about relevant incentives and grants across all jurisdictions, updating this regularly and helping Challenge participants to access these assistance where possible – including for manufacturing, cleaner production, resource efficiency, innovation, regional development, and finance.



3.3 Budget estimates

AiGroup in partnership with A2SE has developed an initial budget for the program, split into two distinct elements, the pilot program and the rollout. This is presented in Attachment 3.

- **Pilot:** It will cost about \$1.2 million in the first year to run a pilot for 30 companies. The budget splits 1/3 for promotion, 1/3 for participant support, and 1/3 for administration. Most of this is fixed cost, so the cost of running the pilot with greater than 30 companies would increase only marginally (e.g. with 50 companies the budget would be approximately \$1.5 million. This budget assumes no financial or in-kind contribution from participants.
- **Rollout:** The estimated cost in year 2 is about \$2.15 million, assuming the program is extended to another 100 companies, ie 130 companies in total or \$16,500/participant. The estimated cost year 3 is \$3 million, assuming expansion to 250 companies, while the average unit cost then falls back to about \$12,000/participant. These numbers are consistent with the actual average costs of similar past programs of \$12,000-\$18,000/participant.
- We propose budgeting an additional \$600,000 over the course of the first 3 years of the program, a little less than 10% of other costs, to support the development of networks and support infrastructure.
- The cost estimated for first 3 years of the program, engaging 250 companies, is \$6.4 million plus networks and infrastructure to a total of \$7.0 million.



4. Models for governance and administration

Governance Issues:

The approach favoured by business for the Challenge is to leverage existing infrastructure and client networks, and this means:

- Commonwealth administration of funding; and perhaps measurement and verification and reporting (though this could be contracted out to an independent organisation).
- State government agencies to deliver the program, as they are closer to the users.
- Industry associations to provide member support services in close concert with relevant state agencies (and there is a good model established for this approach by Sustainability Victoria).

All parties agree that this program should be offered nationally and as consistently as possible, though that does not necessarily imply that the program has to be run from Canberra, which is generally remote from the action (corporate head offices and where energy is being used). OEH NSW has a strong preference for a 'business-led' program.

The key considerations to define the optimal model are:

- Sustainability and durability of the program over 15 years. This implies that the organisation running the program needs a stable funding base and the promise of longevity, and the program also should not be vulnerable to a change in government or budget constraints (and ideally the budget should be committed in advance for the agreed 'start-up' phase or a minimum of 3 years).
- Focus. The more that the implementing agency has alignment of its objectives with the objectives of the program and the clients, the more likely that there will be continuity of activity and the necessary focus and commitment to deliver outcomes and overcome obstacles.
- Administration competency and proven track record of running large public programs is essential, and energy-specific expertise is highly desirable. Well established due diligence processes to manage and report on the use of substantial public funds are essential.
- Willingness and enthusiasm to take on the program.
- Independence, to give business confidence that the program cannot and will not morph into a regulatory compliance burden, and stays voluntary and driven for business benefits.
- Ability to effectively connect to the target participant base. This implies that the key delivery organisation(s) should ideally be already providing similar types of services to the same customer base already. The delivery organisation does not, however, necessarily need to be the administrator or coordinator of the program.
- Business focused. The program has to be delivered with a total focus on measurable client business outcomes, rather than mainly on process.
- Run like a business from the outset, with the objective of weaning the program off public funding support in 3-5 years.
- Excellent account management capabilities and ideally an effective CRM in place.
- Good monitoring and verification skills, tools, and experience.



2xEP Challenge Administrator Options

The following alternative models are proposed:

1. Commonwealth administration and program management

This replicates the model used for the EEO and Greenhouse Challenge programs, for which program delivery was conducted by the Commonwealth including all administration, account management, education/information and promotion, service delivery, and monitoring and verification.

In the past, this type of program would have naturally sat with the Commonwealth to fund, administer and deliver. If the Commonwealth still has the appetite and capacity to take on the Challenge, this is still a viable option providing that a sustainable 15 year model be established, supported by all major political parties and/or a sustainable funding model which can operate largely independent of government.

2. Commonwealth administration and state government (with industry association) delivery

In this model, the Commonwealth would conduct central administration and coordination, and monitoring and verification (in concert with states and territories), but delivery would be done by state agencies, with partnering support from industry associations. Measurement and verification could be contracted out to an independent body.

This model involves the Commonwealth having a collaborative role with the states and territories, leveraging the existing infrastructure and programs delivered by state agencies. Note that there is a very great difference in the capacity of agencies to deliver these programs, with NSW being very well positioned to deliver a program for the manufacturing sector already, and Victoria not too far behind (though extremely budget constrained at present), with other states having very little capacity.

Industry associations provide support in partnership with the state agencies for recruitment and providing local networking support for sites.

3. Independent EP body with delivery as per 2.

One model to deliver the program through an independent energy productivity organisation could be to replicate the governance model of the Industry Growth Centres. This model fits quite well (a summary of the existing criteria is appended) based on industry/government/research collaboration, and the governance board of the organisation could be a sub-committee of the 2xEP Steering Committee, covering the relevant sectors. To fit this model, the 2xEP Challenge program would need a business model providing for commercial independence in 4 years. This is feasible but tight – it would be better to have a slightly longer time horizon for complete independence. Business supports the independent administrator model.

This new body could take on the roles outlined for the Commonwealth in model 2, working cooperatively with state agencies to deliver the program.

4. NSW administration of the program on behalf of all the states

This is the model used for the NABERS program. There are budgetary and resourcing constraints that would have to be overcome for NSW to take on this role.

5. Other options: National industry association administration/program management or NGO administration, coordination and measurement and verification are not favoured models by business.



Summary of pros and cons of top three administration options

Criteria	1. Commonwealth	2.Commonwealth/state	3.Independent
Longevity/sustainability	Uncertain	Uncertain but some risk mitigation	Yes, assuming can achieve commercial independence
Focus	Potentially	Probably	Definitely
Admin track record	Yes	Yes	Not as a body, but definitely from the Board
Willingness/enthusiasm	Uncertain but unlikely	Mixed	Yes
Independence	No	Partially	Yes
Connection to participants	Limited	Yes	Yes, though states and industry association partners
Business support	Concerned	Probably	Yes
Implementation feasibility	Yes, though the capacity of the Commonwealth has reduced since EEO was implemented	Issue with difference levels of development of capacity between the states	Yes, though it will take some time to set up the organisation and administration capacity

Selection of the program delivery model should ideally be based on the principal of leveraging existing infrastructure and core competencies of each organisation to achieve the best and most cost effective outcome. So, for both of options 2 and 3, we propose that:

- States engaged for service delivery, integrating support services with existing programs to the greatest extent possible. It would not be necessary for all states to participate initially. With Commonwealth support, and NSW and Victoria on board from commencement, other states could be invited to participate and offered proportional funding (and probably some additional start-up support to accelerate development of their resources), and join over time if they are not ready initially.
- We propose that the pilot run for one year, and in that time interim arrangements be made for supporting companies or sites in states that do not choose to participate initially. Participating companies can be allocated to a state for account management based on location of their head office.
- AiGroup and ACCI member organisations (like VECCI) would be integrated into the program as key partners of the states. Associations are best suited to recruitment, outreach and networking and support for participating companies, and services integrated with existing member services.

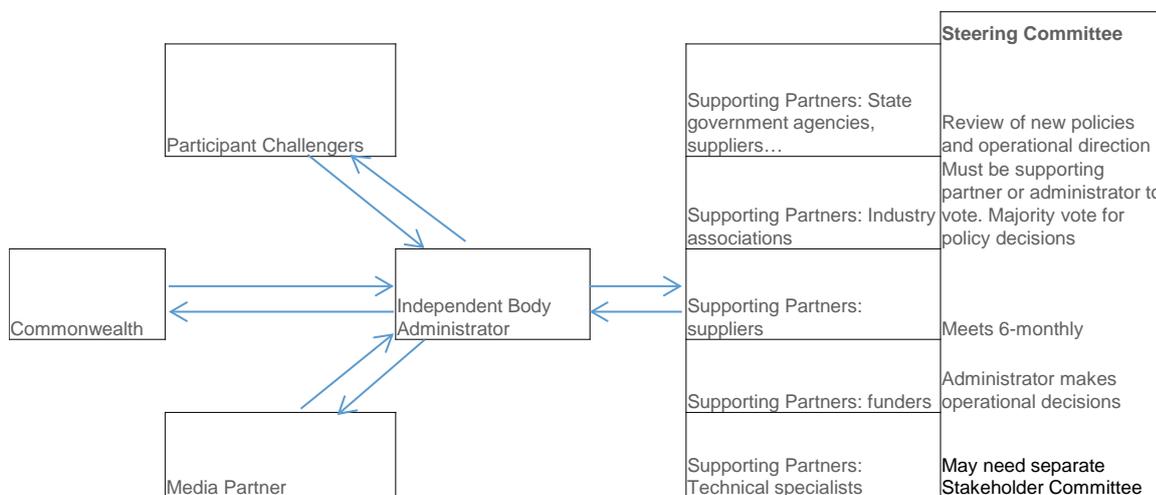
Recommendations: Models 2 and 3 are favoured over model 1. Model 3 is the preference of business, as it has the additional benefit of being business-run, and provides business with confidence that the Challenge will not morph into a regulatory compliance program.



Governance:

We propose the following governance model which borrows from the NABERS model (though the Challenge probably won't be administered out of NSW).

- Establish an MOU between the Commonwealth and participating states and industry associations setting out the basic rules of engagement.
- A steering committee will make decisions about the direction of the program. As it is not permissible to have 'lobbyists' on government boards, and we want the Board making decisions for the Challenge to be protected from vested interests, only the parties mentioned above will be on the main Board, potentially plus the independent administration organisation (if it is not one of these parties).
- The steering committee will have overall accountability for program outcomes.
- We propose to establish a separate stakeholder advisory committee including business participants, suppliers of services and equipment and other technical specialists. There should be members representing each of the sectors involved in the program. Participants would be selected based on merit – i.e. knowledge of the sector and its needs and/or specialist knowledge/experience in energy productivity in the sector.
- The diagram below illustrates one potential governance model for the independent administrator option (including media/marketing/communications partner as the promotion of participants and case studies is critical to success).



NABERS governance

NABERS is a national program managed by the NABERS National Administrator, [Office of Environment and Heritage](#) New South Wales, and overseen by a National Steering Committee, comprised of the following members:

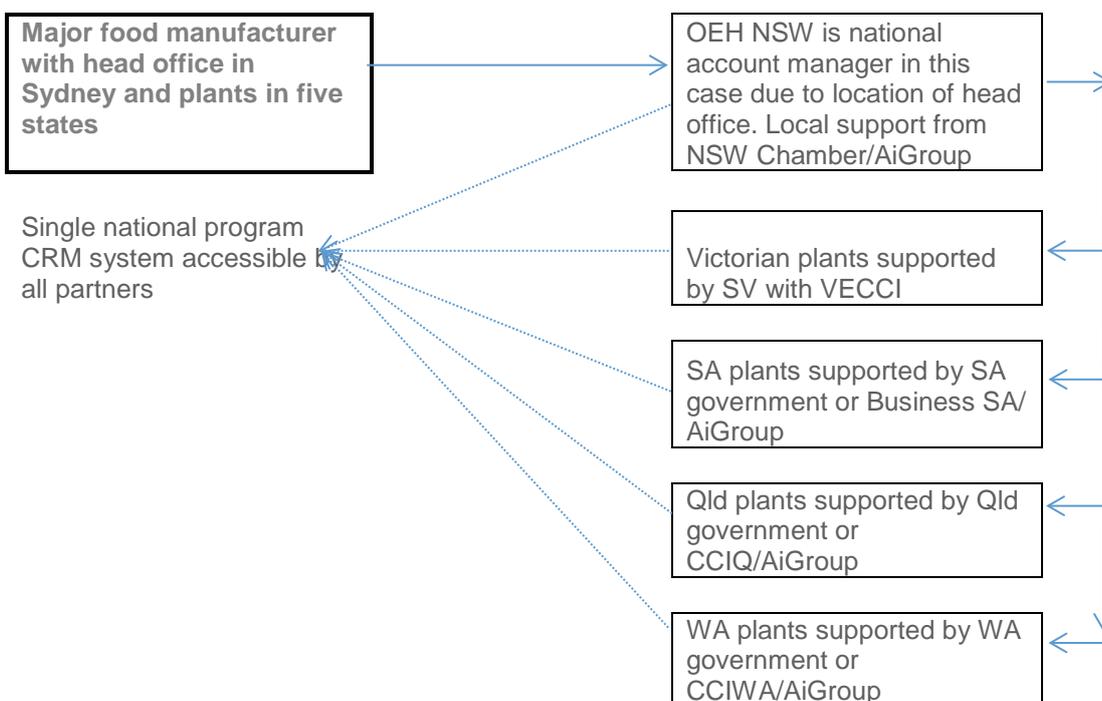
- Chair – Australian Government Department of Climate Change and Energy Efficiency
- National Administrator – NSW Office of Environment and Heritage (OEH NSW)
- Voting members – representatives from the state and territory governments of ACT, QLD, NSW, NT, SA, Vic and WA
- Non-voting member – representative from Tasmania. Industry observer – Australian Sustainable Built Environment Council (ASBEC) Stakeholder Advisory Committee (SAC) observer – Deputy Chair SAC.

OEH NSW manages the operation and development of NABERS throughout Australia on behalf of the National Steering Committee. A NABERS Stakeholder Advisory Committee has also been established to facilitate greater engagement with industry associations and to provide advice to the National Steering Committee.

Account Management:

Another key element to resolve is national coordination of program activities, and account management of national companies, including collection and distribution of fees paid by national companies. The model proposed is shown in the diagram below, from the client's perspective, with a national account management system supported by a CRM system accessible by all key stakeholders.

Account management model for a national company with account management by states



Services Offered:

There would be central co-ordination of services delivery as discussed in the previous page, and there would be some standard energy productivity core services offered nationally through state partners. Additional services offered in each state may differ significantly. We propose that a menu be developed showing core national services, Commonwealth supplementary support (e.g. EEX), and for each state the supplementary offerings (largely from existing broader based programs) that can be accessed in each state from government agencies and industry associations (and perhaps also from others like NGOs). There would also be links with broader business programs which may also be service delivery agents for the program.

Note that some agencies and industry-specific associations may offer industry-specific programs (e.g. for the dairy industry), and so the services menu may be a matrix, or may be accessible in an industry-specific format.



5. Funding models

5.1 Business-based funding sources

Issue: There are great benefits in having significant (or 100%) business self-funding for the program. These include the fact that payment for services:

- Engenders business commitment to the program and an expectation to get results
- Focuses administrators of the program on delivering value to paying participants on an on-going basis
- Increases the chance of gaining funding, as governments don't like open ended funding commitments
- Provides security for the program from political changes, and
- May provide capacity to expand services in line with the client base willingness to pay for services they value.

Balancing factors are:

- Businesses have many competing commitments and if we want energy productivity to be more central on their radar, it requires considerable effort to be expended. Experience globally indicates that a compelling short term commercial case is required for businesses to participate.
- Businesses most value services which are customised and directed to their particular needs. These are expensive to deliver and you need to prove the value before they want to commit to participate.
- The bottom line is that, as we don't wish to compel companies to participate and can't provide a very clear cut short term financial reward, it takes a significant investment to establish these programs and build sufficient brand recognition to make them commercially sustainable.
- There may be drawbacks in setting a fixed-term requirement for the program to be fully self-funding. Businesses tend to be very short term focused, and we are trying to build a 15 year program and encourage businesses to take a longer term continuous improvement approach to drive up EP. There may be good reasons why government would want, for example, to see more companies implementing ISO50001 before businesses see the compulsion.

If 2xEP was to be an independently sustainable support-based program in say 4 years, annual revenues to run the program would need to be raised from participants in the Challenge (e.g. energy users and suppliers of services and equipment), in addition to funding from governments. For stability (sustainability) of the program a large share of required revenue needs to come from predictable sources.

OEH NSW regards the ideal as a 100% self-funding model, but our expectation is that 50% funding from non-government sources would be a solid outcome in the first 3 years, balancing the benefits of independent funding with the need to drive long term sustainable outcomes from business.

See over-page examples in which OEH NSW has been successful in improving program cost recovery, including the NABERS example, which is a fully self-funding program.



Learnings from OEH Sustainability Advantage program (note that this is broader than energy and includes energy/water/waste+):

- *Running for 9.5 years and established credibility and value proposition. Had \$2-3k joining fee and no recurrent fees.*
- *Focus groups: Many companies open to paying a fee, most valued services were the account management and other 1:1 services like consulting support from a panel member.*
- *Of the current 550 medium and large businesses, 120 partners expected to pay \$4k annual fee (to gain \$6+k direct value from 30 hours expert consulting assistance + 1:1 support from a project officer + tailored workshop, networking and other benefits), and 300 to be 'networking' partners that may ultimately have a fee levied.*

Learnings from the NABERS program:

- *The NABERS program provides commercial building efficiency rating accreditation, lodgement and certification. It has a budget of around \$2 million/year and is fully-self funding from business payments.*
- *Half of the work NABERS does is voluntary and the other half is mandated. Clearly there is no issue collecting funds for the mandatory work but the payment for voluntary ratings depends on the value proposition which has been developed around green buildings by organisations like GBCA.*
- *For some building sectors there is a strong value proposition and for some the case is not as well established and they get lower participations in these activities.*

Funding Sources: Potential sources of industry funding include:

- **Membership fees:** Once the program is established and the value proven to participants, it is expected that membership fees will be levied. The Sustainability Advantage survey found for their target clients acceptance up to about \$5000. We expect that for large energy users in a national program this may comfortably extend to something just under \$10,000, but the value proposition will need to be demonstrated at the right level. This should be easier at national corporate, rather than state level. It may be possible to levy a joining fee as well but it is recommended not to do this initially to avoid creating any barriers to entry.
- **Fees for specific services:** There should be supplementary fees payable for customised and direct consulting services.
- **In-kind support by industry associations:** This might be supplied via the provision of personnel specifically for delivering services from the program as an adjunct to their member services offerings. At this stage we have not included the value of potential in-kind services into the first cut costing model.
- **Supplier partners:** Equipment and service partners could join the Challenge where the benefit to them is the opportunity to engage directly with Challenge participants. Major equipment suppliers, supply-chain partners of Challenge participants and the like could pay an annual fee, in return for attendance at recognition and awards events, advertising in Challenge publications, speaking opportunities at seminars or training, etc. And/or they could be asked to fund specific activities where they are being introduced with potential clients.



- **Sponsorships:** There is also the potential to attract a small number of major corporate sponsors who could make more substantial contributions for the benefit of having their brand associated with the program. As the appetite for corporate sponsorship is totally speculative at this time it has not been included in any program budgeting.

We would expect that the Commonwealth government and also states would make a contribution to setting up the program for 3-5 years and an ongoing funding stream, potentially at lower levels as business-based funding kicks in.

Example of how the program could be made 100% Self-Sufficient

Non-Government Funding Sources Towards Self-Sufficiency - at 250 participants				
Element	Assumptions	Annual fee	# of	Income
Member income	25 large users / multi-site companies	\$10,000	25	\$250,000
Member income	100 large users / single or small number of sites	\$5,000	100	\$500,000
Member income	125 mid-size energy users	\$3,000	125	\$375,000
Supplier member	25 suppliers (equipment, service) as associate members	\$20,000	25	\$500,000
Sponsorships				\$500,000
Fee for Service Charges				\$750,000
Other contributions from Industry Associations etc				\$225,000
				\$3,100,000
			Contribution \$/company	\$12,400

Recommendations:

- We propose member fees be implemented after first 3 years, once the program credibility and brand value are established, at a level set based on customer research.
- We also propose that supplier partners be levied for support in line with provision of specific workshops and services to link users with suppliers. This might include 'marketplace workshops' on specific topics and product/services directories.
- We propose that a tiered fee structure be applied to members based on corporate energy expenditure.
- There may also be differentiated fees based on the level of recognition and services delivered.
- If the Industry Growth Centres model was adopted, then the program would be designed to support a move to full self-sufficiency 4 years from establishment.



6 Value proposition for stakeholders and participants

6.1 For business

Issue: This is the key, because if business will not voluntarily sign-on there is no program, so we need to create a compelling justification to participate. This should address generic reasons for improving energy productivity and in the early stages we need to provide a compelling (and somewhat customised) justification to participate for the decision makers in each business.

There is an imperative for business to rapidly improve energy productivity to improve profitability and competitiveness. In countries such as Germany industry recognises that high energy productivity can be a key source of competitive advantage.

What’s in it for corporate Australia?



Risks of inaction include ...	Rewards of action include ...
Energy price escalation erodes profits	Reduce costs and improve competitive position
Competitors adopt technologies and gain competitive advantage	Increase shareholder value
Activist shareholders threaten licence to operate/Loss contracts for sustainable supply chain customers	Reduce C emissions Attract and retain the best staff
More interventionist carbon mitigation policies likely	Business operations are improved/optimised



The level of interest from any particular business in the 2xEP Challenge will largely be a function of program design and the perception of the benefits and risks of engaging.

We expect that for the most active companies and larger corporates, the main attractions for participation in the program will be for key decision makers:

1. **Senior executives** will want to ensure that their perceived value of the publicity and brand enhancement significantly exceed perceived level of cost and risk. So they need to be persuaded of:
 - a. Level and value of public recognition gained and the potential brand value benefits, so it's important not to skimp on publicity and recognition activities, and be able to confirm the value of the PR on offer
 - b. Sense of corporate obligation – good corporate citizen, social licence to operate – this may be linked with Australia’s carbon reduction targets and other sustainability measures.
 - c. Low cost for them to engage, especially avoiding perceived duplication.



- d. Ensuring that there is no need to adopt new metrics which do not align with existing targets. (This will require some finessing as we will need additional metrics for this program but should provide enough flexibility in the reporting to ensure limited scope for conflicts with existing targets. Ideally we can demonstrate what is on offer is a process which provides a long term framework for their existing activities and encourages them to stretch in ambition.
- e. The cost of implementing measures will not be excessive and will attract a high rate of return. (They will want to understand whether it will require major capital spend to achieve commitments. The fact that the target is 2030 will alleviate this concern somewhat).
- f. Minimise the risk of negative exposure for underperformance by focusing the program on the positives and ensuring businesses know that they are not going to be exposed.
- g. There may also be a selling point based on the fact that by participating voluntarily, the company may be able to avoid more intrusive/mandated measures by governments in future.
- h. Ultimately business may see that investors are scrutinising their performance around energy and carbon and the ability to demonstrate progress on energy productivity may become a strong positive for investors both by demonstrating a focus on sustainability and carbon mitigation, and also perhaps that EP performance is a good measure of overall productivity performance and good management practices.

Senior executives will expect a letter from the Minister to their CEO to start the engagement, and follow-up contact from other very senior level people in the first instance.

2. At **energy manager/recommender** level, companies will be seeking to determine the value of support and perceived benefits gained compared to the effort required to participate:
 - a. The cost to implement will be a consideration, but their first consideration will be about the ongoing workload involved.
 - b. The benefits of CEO commitment to help them to drive improved energy performance: If sold well to them, they will see the program as beneficial, as many were concerned that the EEO program was cancelled because it removed their leverage over operations to get energy management implemented in the business. (The EEO contacts database is generally at this level and will be a useful database of people to discuss the program with and gain assistance in engaging senior management).
 - c. The value and practicality of support services on offer to assist them to implement the target. So the support needs to be explicit (and valued).
 - d. Driver for better data measurement and analysis.
 - e. The existence of networks of peers may also play an important role in establishing value to people tasked with implementation of targets – for example the Smarter Resources Smarter Business outcomes will be disseminated in part via site visits by business to participant sites where significant materials and resource saving initiatives have been implemented (communication with Katrina Woolfe, (communication with Katrina Woolfe, Sustainability Victoria and Department of Economic Development, Jobs, Transport and Resources)



Other issues that may be relevant include:

- At the 'implementer' level (engineering, facility management or environment/sustainability), the major drivers (drawing on ClimateWorks analysis of EEO) will be regular analysis of energy data, energy and related policies and senior management oversight (noting that these apply to a survey on energy efficiency and not necessarily the range energy productivity aspects). This is a good reason to select companies in the first (leaders) phase of the program that have these systems in place. Companies that have solid continuous improvement processes in place e.g. ISO14001 would be targets.
- Whether international competitiveness is a key issue and what areas of business offer the best opportunities for improvement (or where energy productivity sits among opportunities for improvement). Also, where companies are part of global organisations, consideration of factors that would lead them to participate in 2xEP to improve energy productivity, like commonality of programs with those in other countries and their sense of the growing international importance of EP, the need to contribute to whole-of-entity outcomes.
- Understanding of the scale of non-energy benefits that could be achieved and need for education to establish this understanding, and support that would gain focus on boosting energy productivity (e.g. networking, hands-on support services, financial incentives)
- Corporate responsibility and sustainability objectives and programs in place, as companies with strong objectives and improvement targets would be ideal early movers, as long as they did not see any conflict with the EP improvement targets and existing targets.

Potential financial incentives:

- Clearly any direct financial incentives (particularly to accelerate implementation of capital projects to improve EP) would be desirable to boost EP gains from the program.
- There may be opportunities to link participating in the program with additional access to benefits under the state-based white certificate schemes e.g. Energy Savings Scheme (ESS) in NSW and VEET in Victoria. This could be in the form of additional advisory support to assist companies to participate in the schemes, or even as an extreme case to offer 2xEP Challenge participants at the highest level of recognition a loading on certificate for larger projects (though this latter options would be a difficult process and take a lengthy time period to implement).

Note: After the key design elements are further detailed, we propose to approach a number of companies with active energy management programs to get their input on what they see is in it for them, their willingness to participate and under what conditions. This will be used to design an initial phase leaders/champions/ambassadors program. It will also test the amount of educational effort required about the new paradigm of energy productivity.

In parallel with this first phase, we can test the appetite of the next tier of companies by showing them the initial benefits gained by the leaders and define their additional needs to participate.

Government agencies as Challenge participants: It is regarded as highly desirable for the program that government agencies be encouraged to sign on to the 2xEP Challenge to demonstrate the partnership between government and business and to show leadership through demonstrating their serious intent and 'walking the talk'.



6.2 Government involvement as a sponsor and implementer

6.2.1 Boosting energy productivity

Commonwealth Government Objectives

The Energy White Paper calls for Commonwealth action on Energy Productivity including:

Developing a National Energy Productivity Plan (NEPP) to increase national productivity and competitiveness, including

–‘information provision and **encouraging voluntary action**’

A national energy productivity improvement target, of up to 40% between 2015 and 2030 is possible.

The Commonwealth has expressed substantial interest in supporting a voluntary program and given it has policy and budgetary constraints around funding and regulation, this area is one of its degrees of freedom to demonstrate Commonwealth leadership and deliver a new initiative which could contribute to achieving the target.

It would thus be reasonable to expect significant Commonwealth funding and other support for a program with robust design and industry support.

Given the energy productivity improvement target currently proposed by the Commonwealth (of 40% by 2030, an average 2.25% annual increase from 2015-2030 compared to 2xEP of 3.5% p.a. between 2010 and 2030), it would seem logical at this stage to offer two options to participants; 2.25% p.a. from now as a minimum ‘member’ and the full 2xEP at ‘champion’ level.

NSW Government

The NSW Energy Efficiency Action Plan calls for a reduction in electricity use of 16,000 GWh by 2020 and is looking to extend the ESS program as its key lever to achieve its electricity targets and extend the scheme to gas, while continuing its efficiency support program for business through Action Matters for Business Programs. The Plan also calls for NSW to become the Asia-Pacific regional centre for energy efficiency. This will require additional innovations like the 2xEP Challenge program.

A successful voluntary commitment program would provide a strong complement to existing programs by attracting some larger companies than would normally engage in Sustainability Advantage, and by providing highly visible PR for high achieving companies that choose to be leaders both within and outside Sustainability Advantage and other OEH support programs.

There is also likely to be significant kudos and exposure for the NSW Government associated with attracting and rewarding business and government EP improvement achievements – e.g. from the recent Energy Productivity in Action Awards night – which attracted the Minister and some 250 business leaders.



Other jurisdictions

Victoria

A voluntary program is likely to have Ministerial and bureaucratic support. Sustainability Victoria was encouraging in its review of this report and provided valuable feedback. SV saw the program as being valuable in progressing beyond 'low hanging fruit' to make the step to comprehensive retrofits, continuous improvement and a higher level of business ambition than has been evident in the past.

We are encouraging the Victorian Government to consider the including the Challenge program as it finalises an energy efficiency and productivity plan. The plan will most likely be formally announced in the first quarter of 2016.

Queensland

With a recent change of government there is increased interest in energy productivity. The new Labor Government made election promises for renewable energy but has made no detailed statements about energy efficiency or productivity. It is very early days in the Queensland EP program, though priorities seem well aligned with EP (rather than EE) and they see value in the Challenge. Based on early discussions Queensland is likely to participate in a Challenge program, but will not be able to actively support large numbers of participants for some time due to resource and budget constraints.

6.3 Industry associations:

Industry associations are interested (ACCI and member associations, and AiGroup specifically) to participate in the program, based on initial discussions to:

- Enhance member services (as valued by Challenge participants) without significantly increasing operating costs
- Gain government funding to support networking and outreach services to support their members to gain the greatest benefits from the program.
- Demonstrate that they are positively contributing on EP improvement and carbon mitigation.



6.4 Expected program benefits and costs

There is not enough information available to calculate a robust benefits-to-cost ratio at this time. We propose that this work be done during the pilot phase when a better informed assessment of likely rollout costs and benefits can be completed.

The following information about benefits and costs of the EEO program is provided by way of background: The Senate hearing process in relation to the EEO program repeal bill¹ heard, in relation to the full program review by ACIL Tasman, that:

Full cycle review outcomes

An evaluation of the first full cycle of the EEO program was conducted by consultants ACIL Tasman in 2013.[67] A key finding and recommendation of this review was that the EEO program to date had delivered benefits to participants well in excess of their costs, that information type market failures continue to remain an important barrier to energy efficiency investment and that the EEO program should complete its second cycle.[68]

Some of the other key findings of the full cycle review included:

the 'conservative' estimate of the ratio of industry's cumulative BCR attributable to the EEO program was 3.67, net of implementation and compliance costs

assessment and implementation costs over the first cycle of the program were reported as being just over \$914.51 million. The administrative costs of the program over the same period were about \$18.95 million and

the 'additional' improvement in energy efficiency attributable to the EEO program was approximately 40 per cent of the energy efficiency improvements in the Australian industrial sector, with energy savings (88.8 PJ) and net financial benefits (\$808 million per year) reported from opportunities to be implemented.[69]

¹ Retrieved from: http://www.aph.gov.au/Parliamentary_Business/Bills_Legislation/bd/bd1415a/15bd005



7 Draft Memorandum of Understanding (MoU) for participants

<p><i>'Company' wishes to rapidly improve its energy productivity to demonstrate leadership in sustainability, effective resource management and reducing greenhouse gas emissions. As a result 'company' wishes to participate in the 2xEP Challenge.</i></p> <p><i>'Company' commits to making best attempts to achieve the following by 2030:</i></p> <ul style="list-style-type: none"> • Select from the following options: • <i>Double energy productivity by 2030 (from 2010 base). This requires 3.5% annual improvement in energy productivity. If you commit at this level you will in the 'Champions' group, and eligible to use the 2xEP Challenge logo.</i> • <i>2.6% annual improvement in energy intensity. If you commit at this level you will participate in the 'Premier Members' group.</i> • <i>Propose your own energy productivity target. You can select a base year between 2010 and 2015 for reporting. The target should be demonstrably above BAU (and ideally double your historical rate of improvement). If you commit in this manner you will be a 'Member' of the Challenge.</i> <p><i>'Company' will report its energy productivity performance annually in its annual report (or CSR/sustainability report) and compare its results with its own target performance. 'Company' will maintain adequate data on its performance to allow for any claims made to be audited. Every 3 years performance will be reviewed to determine the appropriate membership level for the next period.</i></p> <p>Signed: CEO to sign</p>	<p><i>Government (or other responsible counterparty), commits to provide:</i></p> <ol style="list-style-type: none"> 1. <i>The following public recognition for 2xEP Challenge participants:</i> <ul style="list-style-type: none"> • <i>Joining ceremony with Minister. Press feature promoting participating companies and opportunity to co-advertise.</i> • <i>Membership certificate and plaque after achieving first year milestone.</i> • <i>Annual recognition event and awards</i> • <i>Use of 2xEP logo if commits to Champion membership</i> 2. <i>Preferential access to support program offerings (including specific support programs that are only available to 2xEP Challenge participants).</i> <p><i>The purpose of these programs is to support companies to achieve 2xEP, and in particular to build skills and capacity, access finance, and implement a continuous improvement program for energy in the business to help drive productivity improvement through to 2030.</i></p> <p><i>The specific program offerings at this time are outlined on the Challenge website and will be steadily enhanced over time.</i></p> <p>Signed: Head(s) of Department(s) on behalf of Minister(s)</p>
--	--

Working with your industry association(s)

AiGroup and ACCI and its member organisations (including NSW Business Chamber and affiliates) support your engagement in the 2xEP Challenge, and each has a liaison officer to assist you to get the most from the Challenge program. They will be pleased to link you up with support activities run out of the association as part of your member benefits. Please find information on the relevant activities offered by your industry association on the Challenge website, and linked information on industry association websites.



THE 2xEP CHALLENGE: FINAL FEASIBILITY REPORT

The [US] Alliance to Save Energy suggested that we also add the following text to the MOU which we are at this stage proposing for further consideration:

By joining the 2xEP program, "Company" also endorses the Global Alliance for Energy Productivity (www.globalproductivity.org) goal of doubling global energy productivity by 2030, and thereby commits to 1) improving their own energy productivity, 2) sharing success stories and 3) encouraging other organizations to endorse the goal.



Attachment 1: History of voluntary business programs

Examples of programs over the last 20 years

There are examples of successful voluntary energy and resources (and/or GHG) programs in Australia and this was the focus of government programs for medium to large business in the 1990's and early 2000's, such as:

- NSW SEDA Energy Smart Business, and
- Commonwealth Greenhouse Challenge Program

The focus changed from 2007 until recently, with mandatory reporting programs becoming a more typical approach, including:

- Commonwealth Energy Efficiency Opportunities program mandated for businesses consuming more than 0.5 PJ of energy per year,
- Energy Savings Action Plan and Water Savings Action Plan programs for gazetted (large) energy using businesses in NSW, as well as local governments and certain State Government agencies,
- Victoria's Energy and Resource Efficiency Program (EREP), a mandated efficiency program (with mandated implementation of opportunities with a payback of less than 3 years)

For smaller and mid-sized business (not captured by EEO, ESAP, EREP) voluntary support and recognition programs have been the norm, such as:

- Sustainability Victoria's Smarter Resources Smarter Business Program, and
- OEH NSW Sustainability Advantage Program and Energy Saver Program
- The CitySwitch program (<http://www.cityswitch.net.au/>)

These have been complemented by information programs for business. More recently these initiatives have included

- Energy Efficiency Information Grants, implemented by the Commonwealth Government,
- Energy Efficiency Exchange (EEX) website developed by the Commonwealth Government

Action has also been stimulated by financial incentives provided under programs such as:

- Clean Technology Investment Program (CTIP) run by the Commonwealth DCCEE and AusIndustry (\$286 million in co-funding, leveraging \$591m of private investment),
- Greenhouse Gas Abatement Program (GGAP), which provided generally large energy users with grant funding to assist with the implementation of projects that could abate large amounts of GHG emissions,
- NSW Energy Savings Scheme (ESS), and Victoria's VEET scheme with similar programs in ACT and South Australia,
- Climate Change Fund, which was run by the NSW Government from 2007 and provided grants to houses, business and community organisations to save energy, water and GHG emissions,



- The Green Building Fund (GBF) was run by the Commonwealth Government to reduce the impact of Australia's built environment on GHG emissions, by reducing energy consumed in the operation of existing commercial office buildings, hotels and shopping centres,
- The Local Government Energy Efficiency Program (LGEEP) supported LGAs to install energy-efficient solar and heat pump hot water systems in LGA owned or leased buildings and community facilities, with a focus on low socio-economic or otherwise disadvantaged areas,
- The Community Energy Efficiency Program (CEEP) was a competitive merit-based grant program that provided co-funding to local governing bodies and non-profit community organisations to implement energy efficiency projects in council and community owned facilities, with a focus on low socio-economic areas and regional councils,

1. How have voluntary programs performed?

It is worthwhile considering the objectives that programs are measured against – and whether voluntary commitment programs are regarded as leadership programs to demonstrate what is possible for similar businesses to achieve, or whether they are seen as being mainstream change programs, aimed at delivering substantial savings across the target markets for the program. This is considered later in some detail. The fact that the concept of 'doubling energy productivity' is relatively new in Australia and internationally, means that there are some special challenges with launching a mainstream program in this area.

This section examines the performance of past voluntary programs, particularly those that have targeted the mid to large sized energy using businesses that would be expected to be the key target for a 2xEP Challenge program.

i. LBNL Review of Voluntary Agreement Programs, 2005

A 2005 review of voluntary agreements for energy efficiency and GHG abatement in industry by Lawrence Berkeley National Laboratory (LBNL)² identified three categories of voluntary program, including:

1. programs that are completely voluntary,
2. programs that use the threat of future regulations or energy/GHG emissions taxes as a motivation for participation, and
3. programs that are implemented in conjunction with an existing energy/GHG emissions tax policy or with strict regulations

The paper identified the Greenhouse Challenge Program as fitting within the 'completely voluntary' category, and SEDA ESB would also fit this description. The following observations are made in the paper about the performance of voluntary programs:

- Voluntary programs are characterised by the use of relatively low-cost incentives for entities to participate. For GCP these included government and public recognition, provision of information on energy-efficient technologies, and government assistance and training in energy management. SEDA ESB also used these approaches, together with assistance for energy

² 2005, Voluntary Agreements for Energy Efficiency or GHG Emissions Reduction in Industry: An Assessment of Programs around the World; Price, Lynn, 06-01-2005



audits/business case development (they paid for a contract 'energy manager' contractor to work with the company and these contractors were incentivised to achieve target savings), and later with financial incentives via the NGGAS.

- Industrial sector energy and GHG coverage was typically under 50%, compared with 90% coverage where the threat of future regulation or current GHG/energy taxes existed (which could be avoided by participation).
- Many voluntary programs did not meet target emission reduction goals or could not measure them. GCP participants achieved emissions 14% below BAU but did not reach their target. Programs offering more intensive support achieved better outcomes than those with light-handed support.
- Several countries with voluntary program went on to establish stronger programs in follow-on phases. While later Australian programs were not covered by the report, this trend appears to have been repeated here with the EEO, ESAP and EREP schemes.

The report also noted that *"a key element of voluntary agreements is that they focus the attention of all actors on energy efficiency or emission reduction goals."*

This points to the fact that it is important to have realistic expectations for voluntary programs – they can be very effective as leadership programs, but are not going to be adequate by themselves to drive 2xEP outcomes – they are important element of an integrated program offering and are very valuable for the elite companies and through the example of elite companies to support other programs for less motivated businesses.

ii. Greenhouse Challenge Program

The most substantive (qualitative) reporting of the performance of the GCP was located at the Australian Parliament Hansard website³. Some of the main observations that are noted here from the review of the GCP include:

- The Greenhouse Challenge Program was a useful vehicle for raising industry awareness of climate change and for improving expertise in emissions accounting and emissions abatement. It was found that the Program should be viewed as a transitional strategy until a more comprehensive framework for industry emissions abatement beyond 'no regrets' was implemented. (This finding missed the on-going opportunity for recognising companies that continue to achieve above and beyond regulated expectations).
- The main focus of the Program's activities was to build capacity for the accurate measurement and reporting of emissions, and to encourage industry to improve its efficiency in energy use and processing.
- At the time of the review, 47% of industrial energy use / GHG and 90% of electricity sector emissions were covered by the GCP, and 366 Cooperative Agreements were in place (+ 238 still intended sign').
- The Program allowed companies to determine what they consider cost-effective without any independent measure of what actions may be economic.....this approach complicated

3

http://www.aph.gov.au/Parliamentary_Business/Committees/Senate/Environment_and_Communications/Completed_inquiries/1999-02/gobalwarm/report/c08a: Report of the Senate Environment, Communications, Information Technology and the Arts References Committee: The Heat Is On: Australia's Greenhouse Future, Chapter 8 THE GREENHOUSE CHALLENGE (Part a)



assessment of the quantitative savings from Program because it blurs the distinction between reductions which may have resulted from normal business efficiency measures and those which are directly attributable to the Program.

- Much of the remainder of the chapter is focused on the scale of any 'gap' between the self-reported savings from participant action plans of 23.5 Mt CO₂-e and the likely 'beyond-BAU' figure, and independent verification processes surrounding the program that could separate out the savings attributable to the policy and those that would have occurred anyway.

The review also noted GCP funding of \$27.1m in the 5-year period from 1997, a little under \$5.5m per year to run the program.

iii. SEDA Energy Smart Business Program

Limited detailed analysis is available on the performance of SEDA ESB, (limited to a report presented by SEDA at the ECEEE Summer Study proceedings in 2000⁴ and some information from annual reports). In relation to ESB the ECEEE presentation noted:

- In designing the Energy Smart Business program a number of barriers to energy efficiency were recognised and mechanisms incorporated into the MoU to overcome those barriers – that is, business would acknowledge barriers and agree to a range of quantitative and time-based targets for improvement in energy use where a 20% IRR (or better) could be achieved: Businesses were required (and supported) to:
 - Prepare an action plan, outlining how subsequent milestones will be achieved, within three months of joining the program
 - Upgrade a representative space (usually a small project that can be accommodated within an existing capital or maintenance budget) within 6 months of signing the MoU
 - Upgrade 20% of operations within 15 months
 - Upgrade 50% of operations within 24 months, and
 - Upgrade at least 75% of operations within 5 years
- The MoU requires that a senior staff member be allocated the responsibility for the ESB program, and energy management in general
- The Chief Executive Officer or Managing Director of the Partner was required sign the MoU to demonstrate top level commitment to the program and energy efficiency.
- Results at the time of reporting were that identified savings of 3.1 PJ (3.5 PJ program target from 25 PJ coverage) had resulted in 0.667 PJ of implementation (using engineering / audit estimates in general rather than independently audited savings). Identified and reported implemented savings were ahead of target for the Program at the time.

SEDA's 2003-04 Annual Report highlighted that \$91m was spent over 9 years on all activities. Budget for ESB is not separately noted, however as a flagship program that provided significant hand-holding for participants (through subsidising consultants to support the efforts of companies), it is reasonable to

⁴ Retrieved from http://www.eceee.org/library/conference_proceedings/ACEEE_buildings/2000/Panel_4/p4_7. Developing the Australian Market for Energy Efficient Buildings. Daniel Cooper, Ronlyn Duncan, Bruce Precious, and Nicole Workum, Sustainable Energy Development Authority



assume that program expenses on this activity were substantial and exceeded \$15,000/company in the initial years, falling as the consulting support was removed over time.

iv. ClimateWorks Australia – EEO Program reporting

Though not a voluntary program, reporting on the recently-finished Energy Efficiency Opportunities (EEO) program offers some insights relating to capacity of companies and implementation efforts (which was voluntary) that may be useful in developing the case for a 2xEP Challenge. The program ran from 2006 to 2014, requiring 250-300 of Australia's largest energy users to assess and report on the outcomes of comprehensive energy assessments across their businesses.

Two papers by ClimateWorks Australia shed some light on the performance and some key outcomes for EEO, including a report on factors affecting industrial energy efficiency⁵ (IEE Report), and a Senate submission relating to the EEO repeal bill⁶ (Senate Submission). The IEE Report interviewed 47 large energy users, and notes:

- EEO data shows that the companies that identified and implemented the most savings, saved 14% of their energy use, 6 times more than median companies. The companies in the top quintile identified savings equivalent to 21% of their energy use on average, and they implement 14%. This indicates they converted more than 60% of identified savings into realised energy savings within a few years. This demonstrates that a cohort of (say top 50) top performers may be interested in taking a public leadership role, and a middle group (say the next 50%) that identified significant savings but implemented a much smaller proportion that would be good followers in a voluntary program, taking the lead and case examples from the leaders.
- Respondents with better internal business practices also demonstrate higher implementation of energy efficiency activity. These practices are:
 - Regular analysis of energy data,
 - Inclusion of energy efficiency in corporate policies or operational guides, and
 - Board and senior management oversight of energy efficiency.

The Senate Submission by ClimateWorks highlighted some of the benefits (realised and yet to be realised / at risk) from the EEO Program. The key findings of this include:

- *The EEO program has delivered an additional \$291 million in annual net financial savings for participating businesses. The energy savings enabled by EEO account for around 41% of all energy savings achieved in the sector.*
- *The EEO has delivered additional energy savings by building companies' skills, knowledge and processes to implement energy efficiency activities*
- *After the carbon price, the EEO was reported to have the greatest influence on motivating companies to implement future energy efficiency activities.*

⁵ 2013, Tracking progress towards a low carbon economy: 6. SPECIAL REPORT on factors influencing large industrial energy efficiency Summary Report July 2013

⁶ ClimateWorks Australia Submission to the Senate Economics Legislation Committee into Energy Efficiency Opportunities (Repeal) Bill 2014 20 June 2014



- *While company capability has improved, there remains significant potential for improvement – Removing the EEO could erode some of the benefits that have resulted from the program and limit the extent to which this outstanding potential is captured*

The report also notes that:

- It is clear from both ClimateWorks' research and the EEO Full-Cycle Review (ACIL Tasman 2013) that company capabilities resulting from participating in the EEO have significantly improved. These capability improvements include an increase in internal skills and information availability within companies that support the identification and implementation of energy efficiency opportunities.

Submissions by many large energy users and large energy user associations to the Senate review of the repeal of the EEO program contended that the costs of the program were high and that the additionality of the program was questionable⁷.

The cost of administration of the program was some \$2.2-3.9m per year from 2004-05 to 2008-09.

It is worth noting that EEO also left a negative legacy in perceptions for many large companies that should be considered in the design of a new voluntary program. These include:

- Companies did not like being required to run a continuous improvement program with a structure that was not completely aligned with their internal programs (e.g. ISO14001) so it required additional activities considered unnecessary.
- They did not like being required to mandatorily report energy performance in formats not aligned with their other reporting activities.
- They would have liked to see a carrot for encouraging implementation of identified activities as well as the mandatory reporting stick.
- Many were concerned that there would be a later attempt to mandate implementation of the measures identified, encouraging under-reporting

It is important for acceptance that any new program avoids the most unpopular features of EEO.

A number of aspects relating to the programs reviewed above are relevant in terms of assessing the feasibility and nature of a 2xEP Challenge and these are discussed in later sections.

v. 'Voluntary' ISO 50001 Programs

The EEO section above also raises the likely need for a 'voluntary' program approach which can encourage companies to take up and drive continuous improvement programs (e.g. ISO 140001/50001 or similar suitable internal corporate systems). The following slides examine drivers for implementing ISO 50001 and this demonstrates that purely voluntary mechanisms (without any tax incentive/stick) have been spectacularly unsuccessful in attracting companies to participate and thus it is not recommended that there be any requirement for ISO50001 certification in the 2xEP Challenge program.

vi. Context of a voluntary program

A 2xEP Challenge program needs to be examined in the context of other complementary programs. There is no doubt that to achieve 2xEP there will be need for an integrated set of support programs to

⁷ Retrieved from www.aph.gov.au/Parliamentary_Business/



assist companies to rapidly accelerate their rate of energy productivity improvement, including making step change improvements at times of major capital investment, and to maintain the rate of improvement over the next 15 years, requiring an effective continuous improvement program to be implemented.

It is not realistic, based on all the evidence locally and internationally to expect a purely voluntary 2xEP Challenge program to do the bulk of the heavy lifting to achieve 2xEP. But these programs can assist leading companies to maintain and increase momentum for change by re-engaging senior management, and be strong catalysts for change in the next tier of companies by providing strong leadership examples of what is possible and how to achieve it.

In NSW there is a range of complementary programs in place and the stronger the linkages between these programs and the Challenge, the more likely that the Challenge and the existing programs will succeed. As an example, if there was some additional incentive for Challenge companies available through the ESS program for implementing major projects this may improve the performance of both programs. [Note that this is not likely to be an option given the requirement to legislate changes in this program].

vii. What do these observations mean for 2xEP Challenge?

A number of aspects relating to the programs reviewed above are relevant in terms of assessing the feasibility and nature of a 2xEP Challenge.

- Voluntary programs and voluntary implementation from mandated assessment programs have led to modest savings achieved, and significant levels of un-implemented opportunities. A more broadly focused energy productivity assessment would expand this 'pool' of untapped savings. It will be valuable to document these broader opportunities and achievements to inform industry about EP. (There is also good case study information available from the CTIP program).
- Measurement and verification of actual benefits achieved is valuable to demonstrate that government funds are spent wisely, but it is a balance as collecting the data to support this measurement and verification may conflict with the desire of participants not to be forced to conduct additional reporting. In the same light, while it would be valuable for accountability to be able to determine additionality of savings from these programs, some indication could be achieved through surveying companies, and it would be wise to not spend resources to prove additionality of savings, as it is notoriously difficult for all programs, particularly voluntary ones.
- Companies with strong internal leadership and capacity have implemented much of their identified savings potential (quick payback, no-regrets measures), so may have lower scope for further energy savings compared with other companies who lack the leadership and capacity. However, because we are using a 2010 base year, there will be credit for early action and many of these leading companies may welcome public recognition for their achievements.
- Voluntary programs and mandated programs have led to significantly higher levels of literacy and knowledge around GHG emissions/abatement and energy efficiency. While 'energy productivity' is a relatively new concept, existing literacy and knowledge around – for example – supply chain optimisation, LEAN and 6-Sigma, materials efficiency, waste management, may be fairly high.
- The programs have focused management attention of businesses on efficiency/GHG reduction goals through their promotion and executive-level engagement.
- Voluntary programs such as SEDA, ESB and GCP, and the mandated EEO program appear to have cost \$2-5m per year to administer, with 250-500 participants i.e. about \$10k/participant/year including participant advertising/promotion and recruitment.



Attachment 2. Design aspects and options

Program design aspect	Full program rollout (supporting companies to improve their EP)	2xEP Leaders program
Eligibility	<p>Sectors: applicable to all sectors of the economy.</p> <p>Energy spend: Early focus should be on attracting committed businesses with mid to large energy use (Membership fees may be a barrier to SMEs participating once introduced?).</p> <p>Past performance/tracking: Suggested baseline is 2010; participants should be able to demonstrate tracking of KPIs for at least 2 years?</p> <p>Continuous improvement: Encourage to include CI in 2xEP action plans. Offer ISO50001 training and support.</p> <p>Supporting industry association: Applicant must be a member of a partner industry association (if services or resources are to be supplied - in part at least - via industry associations). Industry associations involved in marketing the program to their members.</p>	<p>Start in manufacturing and government sectors</p> <p>Initially will bring in companies with mid-large energy spend that have already demonstrated EE savings performance through EEO, ESAP, Sustainability Advantage and ESS (and SV in Victoria)</p> <p>Focused on companies with a track record in energy management and leading performance in terms of EP savings achieved.</p> <p>2xEP leaders program will work with firms that have strong continuous improvement processes in place that are relevant to EP.</p>
	<p>Sites or companies: Recognition will be at a company level, so single-site participation may confer recognition for achievements that are not reflective of whole-company performance). Suggest 80% coverage requirement as per EEO.</p>	<p>As per main program, but consideration could be giving to recognition of a particularly large site or large energy using division in a large corporate entity.</p>
Expected numbers	250+	30-50
MoU	See outline of MoU below	





THE 2xEP CHALLENGE: FINAL FEASIBILITY REPORT

Program design aspect	Full program rollout (supporting companies to improve their EP)	2xEP Leaders program
requirements		
Recruitment approach and broader marketing	<p>Large companies:</p> <ul style="list-style-type: none"> • Industry associations with A2SE (and maybe also relevant state agencies) executive level direct sell to CEOs of larger companies • Seek introductions from/with industry associations where appropriate (e.g. PACIA, EUAA, AFGC..) • Linkages with US program currently being established to help international business to sign up with encouragement from US HO <p>General recruitment – large / medium companies:</p> <ul style="list-style-type: none"> • Direct engagement via OEH/SV with leading performers in existing state programs • Member recruitment by industry associations (fee-basis?) <p>2xEP leaders (only)</p> <ul style="list-style-type: none"> • Selected by OEH/SV/DoIIS etc based on past performance. (Top quintile of EEO companies ideal) • Advertisement or tender process to recruit self-selecting EP companies? Only to top up numbers if insufficient 	
Establishment	Metrics, base-lines and targets – Program assistance to help businesses to determine this so that it is measureable, achievable, reportable (say \$1,000 per company).	Program assistance to help businesses to set targets/select metrics – say \$2,000 per site / company. Verify stated performance against metrics and key success factors
Account management	Likely to be best delivered via industry associations and state government with coordination / liaison in first 2 years by government	Smaller numbers could enable the account management to be at AiGroup? Or shared by OEH, SV?
Program support services	<ul style="list-style-type: none"> • Develop a range of online resources, including specific 2xEP Challenge resources and links to external resources. • Initial workshop on EP opportunities and making best use of program • Attendance at – say half-yearly (sponsored?) seminars on EP in first 2 <ul style="list-style-type: none"> • Companies recognised as 2xEP leaders • Facilitate site visits with industry peers • Develop and promote case studies of company 	



Program design aspect	Full program rollout (supporting companies to improve their EP)	2xEP Leaders program
	<p>years providing case study and networking opportunities</p> <ul style="list-style-type: none"> • Annual recognition event(s) attendance, linked to Commonwealth or state events • Subsidised attendance at training events – e.g. ISO50001, planning for 2xEP Challenge, financing • Regular newsletter – e.g. 3-monthly on topical EP issues • Publicity regarding 2xEP participation • Free attendance at site visits to network with other participants – highlighting significant EP successes • EP managers networking meetings for info exchange – central and regional • ISO50001 awareness and implementation support seminars • Subsidised in-house (contractor) coaching to set up an energy productivity program and to conduct an energy productivity scan – a 2 day session with management and operations to identify, brainstorm and prioritise energy productivity opportunities.. • Free access to case studies and information on parallel EP programs internationally (GAEP) 	<p>achievements</p> <ul style="list-style-type: none"> • Support with measurement and verification and enhanced access to financial incentives (e.g. ESS, VEET) • Keynote speaking engagements by company leaders at selected conferences / seminars • Subsidised attendance at training events – e.g. ISO50001 (or training to auditor level) • Subsidised verification of performance at milestones • Possibly: Subsidised in-house (contractor) coaching to set up an energy productivity program and to conduct an energy productivity scan – a 2 day session with management and operations to identify, brainstorm and prioritise energy productivity opportunities..
Linked services/ programs	<p>2xEP Challenge will facilitate access by participants to relevant programs available in each State and/or via industry associations. Ideally there will be an enhanced level or service for Challengers.</p> <p>A key aspect of this is links to key government and industry association programs, services and incentives to ensure currency (this could be</p>	



Program design aspect	Full program rollout (supporting companies to improve their EP)	2xEP Leaders program
	<p>circulated quarterly as part of newsletter updates, for example).</p> <p>2xEP will act as a conduit rather than provide services directly. Access to discounted services could be considered at state agency and industry association level.</p> <p>Examples of programs / information / resources that 2xEP could facilitate access to include:</p> <ul style="list-style-type: none"> • OEH NSW: Sustainability Advantage, Energy Saver, ESS including PIAM&V, NABERS, EE Training • Victoria: SV Smarter Resources Smarter Business program outcomes • Other NSW: Energy Innovation Knowledge Hub (Trade & Investment) • Commonwealth: Energy Efficiency Exchange website resources (at eex.gov.au e.g. EEO resources, tools), Industry Growth Centres (?), CTIP case studies • Standards: ISO 50001 training / auditing • Other / TBA: Decision Support tools, LCA (life cycle analysis) methods • Industry associations: Ai Group Environment and Energy training, Business Improvement & Growth training, Environment and Energy Services, resources at Industry Skills Councils level • Service providers (where paid members?) <p>This is not an exhaustive list and should be added to by approaching – departments specifically dealing with each sector (e.g. industry), development, education/skills are also likely to have initiatives that would benefit organisations in a range of ways directly relevant to EP, and this would be developed to a fuller extent.</p> <p>Services would also change from time to time (expiry, new, modified) and updates would reflect this.</p>	
Promotion / public recognition /	<p>This could include:</p> <ul style="list-style-type: none"> • Signing and recognition ceremonies with photo opportunities for Prime Minister/Premier and/or industry minister with the company CEO. 	<p>Extensive promotion of company achievements that recognises their performance and boosts literacy around EP, and aimed at increasing uptake / demand</p>



THE 2xEP CHALLENGE: FINAL FEASIBILITY REPORT

Program design aspect	Full program rollout (supporting companies to improve their EP)	2xEP Leaders program
awards	<ul style="list-style-type: none"> • A 2xEP Challenge website should be developed. Campaigns to drive inbound traffic, supported by attractive on-line resources will support direct promotional activity. • (Beyond initial funded period) consider some element of competition including recognition of top performers on a 2xEP Energy Champions league table hosted on the website. Benefit from an active media campaign to promote the achievements of the top performers (e.g. top 10 in large and top 10 in SME industry) in the press/media as well as publication of case studies on relevant government and industry association websites. • Recognition and awards events for interim milestones towards 2xEP target. 	Recognition at awards presentations as 2xEP 'Leaders'. Signing and recognition ceremonies with photo opportunities for Prime Minister/Premier and/or industry minister with the company CEO.
Reporting and verification	<p>Participants will commit to:</p> <ul style="list-style-type: none"> • Submit annual report in standard format, or report annually on agreed metrics (likely public + confidential) in annual/sustainability reports. • Be prepared to submit to independent verification (their cost) for milestone achievement levels • Permit 2xEP to collate and report outcomes on 2xEP website • Review targets and plans each year based on performance and circumstances (and adjust trajectory, but not end goal) <p>The administrator will:</p> <ul style="list-style-type: none"> • Assess participant performance in line with agreed evaluation criteria at major milestones or where award level has been attained • Publish an annual wrap-up of 2xEP and promote program successes, 	Provision of reporting and verification subsidised services as noted above.





THE 2xEP CHALLENGE: FINAL FEASIBILITY REPORT

Program design aspect	Full program rollout (supporting companies to improve their EP)	2xEP Leaders program
	high points and all award winners	
Risk issues	This assessment should be performed once basic program design and proposed funding model have been developed and canvassed with key stakeholders. The risks in terms of establishment (participation, stakeholder roles and responsibilities, sales skills, etc), delivery (value of services, capacity to deliver, cost of program delivery, customer service / account management quality, etc), and reporting / verification (rigour v cost, validity of outcomes, additionality if applicable) will all need to be assessed against a preferred program model.	





THE 2xEP CHALLENGE: FINAL FEASIBILITY REPORT

Attachment 3. First draft budget detail

Category	Estimated Quantity - first year	hrs per unit	Estimated Cost per Unit	Estimated Subtotal	Assumptions	Year 2 onwards	hrs per unit	Estimated Cost per Unit	Estimated Subtotal	Assumptions	
Customer administration											
Client database maintenance to track activities, reports, basic data, audits....	1	1	\$60,000	\$60,000	Establishment and management of simple system (i.e. excel). Includes data entry, tracking, assessing progress	1	1	\$150,000	\$150,000	Establishment and management of a databased. Includes data entry, tracking, assessing progress and reporting capabilities	
Account management:											
* Tracking progress											
* Directing companies to right assistance											
* Remedial action on non-performers											
Admin Total				\$60,000					\$150,000		
Recruitment											
Targetting customers	50	0.5	\$200	\$5,000		100	0.5	\$200	\$10,000	Responsible for recruitment of 75 new companies from existing relationships/membership	
Sending initial communications + follow up	50	0.5	\$200	\$5,000		150	0.5	\$200	\$15,000		
Personal contact time	30	4	\$200	\$24,000		150	8	\$200	\$240,000		
Gaining CEO agreement to proceed	30	4	\$200	\$24,000		120	4	\$200	\$96,000		
State government program recruitment						1	1	\$50,000	\$50,000		Recruitment of 75 companies from existing government programs
Recruitment Costs Total				\$58,000					\$411,000		
Client Setup											
Confirming contact people and procedures					Working with signed up program to determine and establish required program data	100	6	\$200	\$120,000	Working with signed up program to determine and establish required program data	
Setting base-line and date	30	16	\$200	\$96,000							
Setting target											
Defining reporting process											
Registration	30	2	\$200	\$12,000		100	2	\$200	\$40,000		
Recruitment Costs Total				\$108,000					\$160,000		
Promotion											
Signing Ceremonies	2	1	\$8,100	\$16,200	Initial program promotion and recognition	2	1	\$8,100	\$16,200	Program promotion and recognition	
Advertorials	6	1	\$20,000	\$120,000		6	1	\$20,000	\$120,000		
annual recognition of achievement	1	8	\$200	\$1,600		1	8	\$200	\$1,600		
Other Awards participation	2	1	\$10,000	\$20,000		2	1	\$10,000	\$20,000		
Radio/TV interviews	12	8	\$200	\$19,200		12	8	\$200	\$19,200		
Office Plaque	30	1	\$1,000	\$30,000		30	1	\$1,000	\$30,000		
Use of Logo - register trademark/promote brand recognition											
Case study development											
- Print	15	1	\$5,000	\$75,000		15	1	\$5,000	\$75,000		
- video	10	1	\$10,000	\$100,000		10	1	\$10,000	\$100,000		
Social media											
- Facebook posts	35	0.25	\$200	\$1,750		35	0.25	\$200	\$1,750		
- LinkedIn posts	35	0.25	\$200	\$1,750		35	0.25	\$200	\$1,750		
- Twitter feeds											
Company Promotion				\$385,500							\$385,500
Support Services											
Workshops and training	8	1	\$8,100	\$64,800	Initial workshops year 1 to cater for initial signups	24	1	\$8,100	\$194,400	Increase in workshops to cater for the increase in the number of companies	
EP 101 including metrics, baselines and data management	1	1	\$3,200	\$3,200		3	1	\$3,200	\$9,600		
ISO 50001/CI	1	1	\$3,200	\$3,200		3	1	\$3,200	\$9,600		
Energy management - modified to include EP	0	1	\$3,200	\$0		3	1	\$3,200	\$9,600		
Integrating energy management in lean	1	1	\$3,200	\$3,200		3	1	\$3,200	\$9,600		
Energy and innovation/international best practices	1	1	\$3,200	\$3,200		3	1	\$3,200	\$9,600		
Technology market - linking users with suppliers	0	1	\$3,200	\$0		3	1	\$3,200	\$9,600		
Funding sources workshops and support- ESS, ERF, training, R&D...	0	1	\$3,200	\$0		3	1	\$3,200	\$9,600		
Finance options workshops and support	1	1	\$3,200	\$3,200		3	1	\$3,200	\$9,600		
				\$80,800							\$271,200
Networking											
Energy managers network (site tours/meetings)	3	18	\$200	\$10,800		10	18	\$200	\$36,000		
Linking with regional networks											
Benchmarking best practices network?											
Links with other areas - training											
				\$10,800					\$36,000		





THE 2xEP CHALLENGE: FINAL FEASIBILITY REPORT

Category	Estimated Quantity - first year	hrs per unit	Estimated Cost per Unit	Estimated Subtotal	Assumptions	Year 2 onwards	hrs per unit	Estimated Cost per Unit	Estimated Subtotal	Assumptions
Direct Consulting Support										
2 day energy productivity scan and report	30	24	\$200	\$144,000	Onsite assistance for all companies that have signed up for the program	130	8	\$200	\$208,000	Lower amount of support required as a result of learnings from year 1
Could offer some services on a commercial basis by setting up standard contract with risk/reward like SEDA did										
				\$144,000					\$208,000	
Support Services				\$390,400					\$759,200	
Reporting and Verification										
Initial plan is reporting to be done in annual/CSR reports					Management and ensuring all contractual obligations are met including reporting	40	8	\$200	\$64,000	Spot auditing from year 2 onwards
Allocation for annual spot audits including annual review of company reporting and collation										
Management/administration/governance/reporting	1	1	\$120,000	\$120,000		1	1	\$135,000	\$135,000	Management and ensuring all contractual obligations are met including reporting
Otherwise need to allocate for development of web-tool for submission and checking of data and ideally link with NGRS data										
Reporting and Verification				\$120,000					\$199,000	
Marketing and Comms										
Social media										
- Facebook page maintenance										
- LinkedIn posts										
- Twitter?										
Articles in technical media on the program										
WEBSITE Maintenance										
Developing on-going content	1	1	\$25,000	\$25,000		1	1	\$75,000	\$75,000	
Developing and ongoing support	1	1	\$60,000	\$60,000		1	1	\$10,000	\$10,000	
Marketing and Comms				\$85,000					\$85,000	
Total costs				\$1,206,900					\$2,149,700	

Year	Companies		
1	30	\$40,230	\$1,206,900
2	130	\$16,536	\$2,149,700
3	250	\$12,135	\$3,033,800
			\$6,390,400

Attachment 4: Sources of energy productivity benefits

In the diagram below the four dimensions of energy productivity improvement are illustrated for a manufacturing environment. At the top is all the benefits AND associated co-benefits of energy savings programs/projects. Most companies do not even adequately recognise and report these co-benefits and energy projects often have 2.5*+ multiple benefits - see IEA co-benefits report:

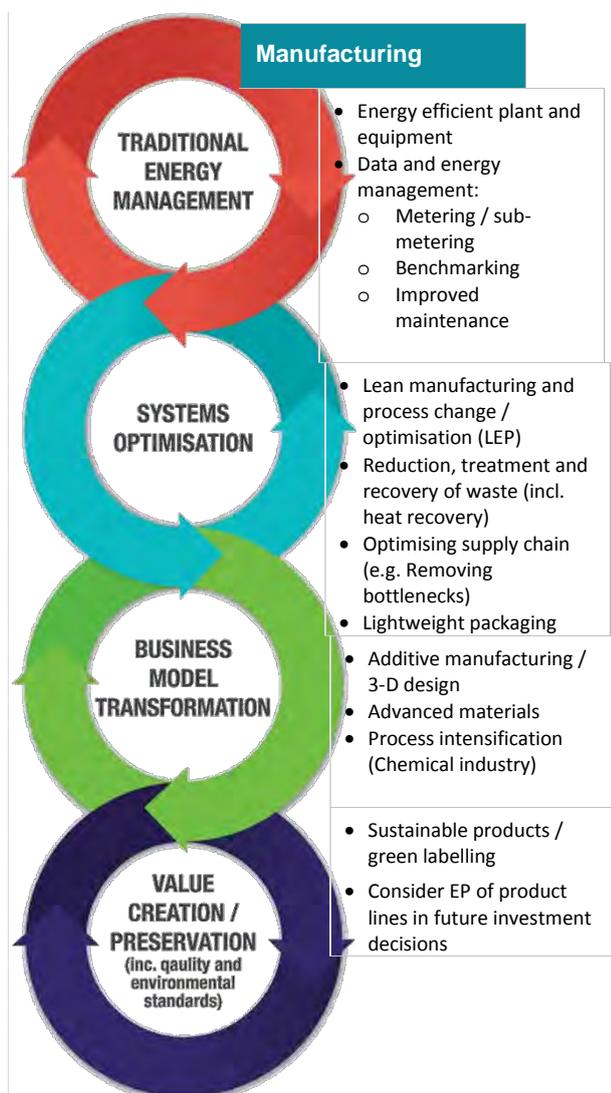
http://www.iea.org/media/workshops/2014/eeu/industry/IEA_IndustrialNonenergybenefitsbackgroundpaper_FINAL.pdf.

The second class of benefit is operational savings achieved by optimising plant operations for broader productivity objectives by bringing an energy lense to the activity.

The third class is where there is a major change in process route to deliver product with the same function as the original product with significantly lower energy intensity.

The final class includes benefits from environmental and quality improvements associated with energy performance improvement – this could include for example a reduction in carbon emissions and associated value.

As a result of all these opportunities to improve energy productivity, making large EP improvements is far easier than making energy efficiency and cost savings alone



Attachment 5: NSW Companies expressing interest to sign onto 2xEP Challenge

The following question was asked of attendees at the Energy Productivity in Action Awards (EPIA) 2015 event, presented by OEH NSW, and 26 individuals responded positively.

(Some large organisations responded positively including Inghams, Opera House, Sydney Water, City of Sydney, Veolia). There are also 20 EPIA businesses that won awards over the last 2 years.

Energy Productivity in Action 2015 post event survey

The A2SE are hoping to launch a voluntary commitment program for business, called the 2xEP Challenge, before the end of this year to provide support and public recognition for companies that show leadership commitment to make this change and gain competitive advantage. Do you think your organisation would consider pledging to improve its energy productivity by 2030?

Answer Options	Response Percent	Response Count
Yes	65.0%	26
No	35.0%	14
<i>answered question</i>		40
<i>skipped question</i>		7



Attachment 6: Industry Growth Centres model

1. The overarching objective of the *Program* is to improve productivity and competitiveness of *key growth sectors*. It will address barriers to productivity and competitiveness at the sector level.
2. *Growth Centres will be established as not-for-profit companies limited by guarantee with a Board of respected industry leaders*
3. The *Program* budget allocation:
 - a) deliver base activities and services: up to \$3.5 million of operational funding per year per *Growth Centre*.
 - b) project fund for assisting the *Growth Centres* to undertake collaborative projects in their *key growth sectors*.
 - c) Grants (\$5.9 million) to fund delivery of activities and services to address specific challenges identified for each of *growth sectors*.
 - d) *Commercialisation Funding* (\$60 million) will also support the *Program's* objective to improve commercialisation of research
4. Funded for four years under *Industry Growth Centre Funding Agreements*.
5. *The Minister will select and announce a Chair for each of the Growth Centre Boards.*
6. *The Department, in consultation with the Chairs, will select and contract a Facilitator for each key growth sector, who will work with the Chair to undertake intensive engagement and facilitation within the key growth sector to develop a Growth Centre proposal.*
7. *Before the Growth Centres are established as companies, the Facilitator will assist the selected Chair during an intensive engagement and facilitation process to bring together interested stakeholders within the key growth sector. The result of this process will be the development of a Growth Centre proposal for submission by the Chair to the Minister.*
8. *Once Minister approves of Growth Centre proposal and the Growth Centres are established as companies, the Chair, as announced by the Minister, will be confirmed as the Chair of the Growth Centre Board.*
9. The *Growth Centre proposal* will outline how the *Growth Centre* will meet the *Program* objectives and *Program Outcomes*. The *Growth Centre proposal* is expected to:
 - a) **Outline how the *Growth Centre* will work towards self-sufficiency within four years;**
 - b) Outline Key Performance Indicators (KPIs) proposed to be used to assess the performance and impact of the *Growth Centre*.
10. The *Growth Centre Board* will be nominated by the *Chair* and the proposed *Founding Members* for each *Growth Centre* at the time of submission of the

