

## SSEE Climate Code Red – Priorities for Action Summary report of 2009 National Conference Workshop

Melbourne, MCEC November 2009

### Overview

A 2 hr breakfast workshop held in Melbourne in Nov 2009 was the culmination of a series of workshops held in 4 cities around Australia. This report provides a summary of the outcomes of that workshop, as well as the outputs of the 4 previous workshops

### Purpose

The workshop was held to build on the results of the Code Red Workshop series by identifying a prioritised short list and actions SSEE can take next.

### Outcomes from workshop

#### 1. Priorities for Action

Of the 5 previously identified themes and actions (refer Appendix B), the following 3 were prioritised as the most relevant for SSEE to act on. Refer Actions on the next page

- A. Energy production and Distribution**
- B. Community Awareness & Engagement**
- C. Urban infrastructure**

#### 2. Collaboration with other groups

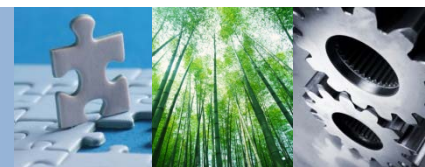
To advance these priorities, it was recognised that there is a rapidly growing number of groups who are acting to address the Climate Change challenge and with whom it may be useful to collaborate. A list of related organisations, their purpose and websites can be found in Appendix A

#### 3. Communication of SSEE's plans and intentions

SSEE will communicate the outcomes of the Code Red Workshop process and in doing so act as a catalyst for action and support in these 3 prioritised areas. Initial communication can be through EA's existing channels and publications, and in the medium term other channels may be used

### Next steps

1. Working groups
  - a. There is a potential for 2 or 3 working groups, to convene around the 3 priority areas above
  - b. These groups may be tasked with advancing the actions for each theme
  - c. In some cases, the actions themselves may need clarifying. For example, the Energy Production and Distribution group may need to consider the suggested actions arising from Melbourne in contrast to the suggested actions arising from the previous 4 workshops
  - d. A working group structure may need support from SSEE to be sustained
  - e. Working groups may comprise initially of people from the Melb workshop who showed interest in those areas, plus any others from other workshops who are passionate about the particular theme
2. SSEE Strategic priorities
  - a. The SSEE Committee may wish to clarify and renew it's strategic plan, using these priorities as key inputs
  - b. IN this way, it can align it's overarching priorities with those arising here
3. Additional workshops + EA communication
  - a. Further Code Red workshops may be held in Canberra and Sydney, as these 2 cities did not hold them previously
  - b. In doing so, the workshop purpose may be to advance on the 3 chosen priorities
  - c. The invitations may extend to key EA Board members and staff, to engage and communicate with them SSEE's priorities and actions



## Summary report of 2009 National Conference Workshop

### Priorities for Action

The actions listed below were identified from sub-groups at the Melbourne workshop. Also shown are suggested actions arising from the previous workshops for these 3 priority areas

	<b>Priorities</b>	<b>SSEE Actions – from Melb. workshop</b>	<b>Actions – 4 Initial workshops</b>
<b>A</b>	<p><b>Energy production and distribution</b></p> <p><i>Drive research and support a shift from coal powered to renewable energy generation and more efficient infrastructure</i></p>	<p>a. Emergency Response Plan</p> <ul style="list-style-type: none"> <li>- Stop non-essential energy consumption</li> <li>-</li> <li>Level 1 <ul style="list-style-type: none"> <li>• Essential services only</li> </ul> </li> <li>Level 2 <ul style="list-style-type: none"> <li>• Implement new gas/diesel solar PV asap</li> </ul> </li> <li>Level 3 <ul style="list-style-type: none"> <li>• Longer term energy management &amp; resources</li> </ul> </li> </ul>	<ol style="list-style-type: none"> <li>1. Support design and investment of renewable energy generation projects</li> <li>2. Support bans on all new coal powered plants</li> <li>3. Design or advise on grid and generation infrastructure; co-generation, distributed gen.</li> <li>4. Develop Engineer's professional skills, standards, qualifications &amp; knowledge sharing regarding energy</li> </ol>
<b>B</b>	<p><b>Community awareness and engagement</b></p> <p><i>Facilitate education and awareness raising in the community to prompt urgent action for change, both to reduce carbon usage and also to engender sustainable values</i></p>	<p>a. Engage &amp; lobby</p> <ul style="list-style-type: none"> <li>• Engineers Australia</li> <li>• Govt.</li> <li>• Professional groups</li> </ul> <p>b. EA Sustainability Scorecard</p> <p>c. Raise Engineers profile</p> <ul style="list-style-type: none"> <li>• Communicate with the public</li> </ul>	<ol style="list-style-type: none"> <li>1. Research and provide 'truth' and facts about carbon</li> <li>2. Support labelling of 'whole of life' costs of goods</li> <li>3. Facilitate community education and communication, particularly with children</li> <li>4. Foster and advocate sustainable values, lifestyle and reduced consumption</li> </ol>
<b>C</b>	<p><b>Urban infrastructure</b></p> <p><i>Improve urban transport, building and infrastructure design &amp; standards to support energy efficient living in our cities</i></p>	<p>a. Connect with EA</p> <ul style="list-style-type: none"> <li>• Influence mindshift towards climate change actions</li> <li>• SSEE 2 pg report to Board</li> <li>• Consensus from SSEE on major issues</li> </ul> <p>b. Recommend immediate actions</p> <ul style="list-style-type: none"> <li>• EA</li> <li>• Govt</li> </ul> <p>c. Develop and apply new needed skills in profession</p> <ul style="list-style-type: none"> <li>• Engineering education</li> <li>• Upskill for immediate action</li> </ul>	<ol style="list-style-type: none"> <li>1. Support urban infrastructure planning &amp; design</li> <li>2. Facilitate professional development, knowledge sharing and best practice</li> <li>3. Develop or support 10 Star building standards</li> <li>4. Design low/ zero emissions vehicles</li> </ol>



**Appendices**

***Appendix A; Related organisations***

***Appendix B; Actions/ Recommendations (from initial 4 workshops)***



## Summary report of 2009 National Conference Workshop

### Appendix A – Related organisations

<b>Organization</b>	<b>Website</b>	<b>Purpose</b>
<b>AGIC</b>	agic.com.au	Establish a national framework for infrastructure sustainability
<b>Alberfield</b>		Energy, environment, risk consultants (specialist risk management)
<b>APACE</b>		Appropriate Technology, Native plants nursery with focus on Sustainable employment/ work practice. Grass roots org
<b>Australian Renewable Energy Professionals</b>		Linked in group
<b>AusLCI</b>		Lifecycle inventory standardizing carbon content assumptions in products
<b>AWA</b>	awa.asn.au	Sustainability and climate change practitioners in the water industry
<b>Bayside Climate Action</b>		Lobby and support local community, council and sustainable local technology
<b>Beyond Zero Emissions</b>		Climate solutions/ planning for zero carbon economy – campaigning, radio show
<b>CANA</b>		Climate action network Australia
<b>CANWA</b>		Overarching network (created by Conversation Council WA) to link together smaller climate action groups
<b>Climate Emergency Network</b>		Victorian network of climate action groups aligned w 'climate code red' book by Phil Sultan and David SPtratt
<b>Eco2sys</b>		Sustainability and Change transformation consultancy
<b>Engineers without Borders</b>		Sustainable development Engineering solutions
<b>Green Building Council of Aust.</b>		Greenstar building rating scheme
<b>Global Footprint Network</b>		Ecological footprinting
<b>NABERS</b>		National Australian Built Environment rating scheme
<b>Parsons Brinkerhoff</b>		Engineering Consultancy
<b>Project One Earth</b>	projectoneearth.org	Business resilience, climate change adaptation, energy & sustainability
<b>Safe Climate Australia</b>		Create a transition plan for Australia to a safe climate
<b>Sustainability practitioners</b>		WA based consultant groups
<b>Synergetics P/L</b>		Environmental consultants
<b>Vic. Technology centre</b>		Meeting rooms 6 – 60 pax, free coffee, sandwiches for SSEE
<b>VIPAC Engineers and Scientists</b>		Consultants – evaluations and evidence based actions
<b>WASEN</b>		WA student body for climate change and environment issues
<b>WA Sustainable Energy Society</b>		Sustainable energy
<b>World Wildlife Fund</b>		Living planet index
<b>Zero Carbon Aust.</b>		A plan to shift to zero carbon in power, transport & agriculture by 2020

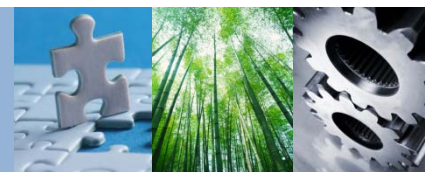


# Summary report of 2009 National Conference Workshop

## Appendix B

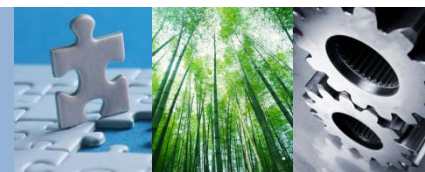
## Themes with Actions/ Recommendations – from Initial 4 workshops

Theme	Opportunity	Call to Action / Recommendation		
1. Energy production and distribution	A7	<b>Coal 'fascists'</b>	<p>Short term - Direct change over from Coal to Gas turbines</p> <p>Long term - locate energy production close to consumers</p> <p>Remove fear of change. Get industry out of their comfort zone</p> <p>Counteract the power of lobbying.</p> <p>Fund large scale renewable generation</p> <p>Incentive scheme. Gov fund on capital expense</p> <p>Broadly implemented feed-in tariffs</p> <p>Education of actual numbers of jobs lost from coal sector</p>	E E I G G C C M
	N6	<b>Increase investment in renewables</b>	<p>Recognition for innovation &amp; promotion of educational seminars/ trade days by RIA, ECA</p> <p>Curriculum development for increased skills in renewable energy innovation - prime the green jobs market</p> <p>Recognition &amp; education; best practice in renewables, awareness raising, appropriate graduate programs for renewables</p> <p>Mandated renewable energy targets - meeting standards within industry sector</p> <p>Lead by example; Govt buildings 100% renewable energy</p> <p>Ban new coal mines &amp; coal power solutions, phase out coal</p> <p>Accreditation for renewable professionals and trade</p> <p>Buy back tariffs; Mandate % of Accredited GreenPower</p> <p>Local renewable energy production, reducing reliance on energy grid; Connect to Smart Grids to help self manage energy use</p> <p>Improve energy efficiency in domestic use.</p>	E E I G G G G C C
	P3	<b>Energy efficiencies</b>	<p>Design; Education; Info</p> <p>Adopt and produce synergies</p> <p>Source water &amp; power closer to source</p> <p>Policies &amp; legislation to facilitate embracing of technology</p> <p>Encourage adoption of technologies</p> <p>Solar air heating - heating of home uses 36% of home energy</p> <p>Efficient use of water - smart metering, level out demand, in-home displays of water/ energy</p>	E I I G C C C
	N8	<b>Clean energy cluster - Innovative energy technologies</b>	<p>Upskill, research groups, borrow skills, share practical examples</p> <p>Develop new technology for storage of intermittent energy sources</p> <p>Invest in clean energy - lead by example. Build skills for the future</p> <p>Co-generation; reduce waste heat, cost savings</p> <p>Policy &amp; tax changes - eliminate fossil fuel subsidies, fund research, eliminate baby bonus</p> <p>Education politicians re Nuclear</p> <p>Reduce use of energy (eg. Air con.)</p> <p>Education of community - vote climate change skeptics out of parliament</p> <p>Practical action - solar panels on roof</p>	E E I I G G C C C
	B8	<b>Distribution Energy Generation</b>	<p>Drive research into methodologies to integrate high levels of distributed generation</p> <p>Incentives for R+D, innovation as % of capital</p> <p>Fed govt. to implement R+D policy &amp; tax incentives</p> <p>Fed Govt to provide positive income for distributed energy – regulator driven (AER)</p> <p>Qld Gov Ban coal fired power stations (C.F.P/S) &amp; conduct efficiency audits on existing CFP/S &amp; legislate a decommissioning program.</p> <p>B8 – G4 Legislate to reduce advertising for increased consumerism</p> <p>Awareness raising at Primary Schools</p> <p>Energy efficiency , appliance rating e.g. Kw/hr usage = \$\$</p>	E I G G G G C C
	P6	<b>A better grid - More renewable energy</b>	<p>Design cool stuff to work better</p> <p>Refuse to design crap systems</p> <p>Introduce Green/ Efficiency Rating system for Eng.</p> <p>Redesign Engineering courses to normalise renewables &amp; higher efficiency</p> <p>Lobby Govt to enact renewable &amp; Green projects</p> <p>Peer to peer training</p> <p>Incentive program for renewables - RET, Carbon price</p> <p>Infrastructure funding - grid &amp; generation</p> <p>R&amp; D incentives - develop economies of scale</p> <p>Desist from subsidising the fossil fuel/ coal fired industry</p>	E E E E E G G G G



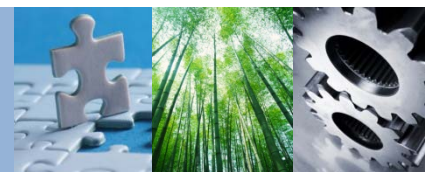
## Summary report of 2009 National Conference Workshop

Theme	Opportunity	Call to Action / Recommendation	
2. Resource & material design & lifecycle	B5	<b>Forests &amp; Fibre</b> Design & maintain forest as ecosystem Design and implement new fibre technology New materials Change fibre sources, eg hemp Develop new fibre uses Legislate change, land allocation, cash, replant forests to soak up carbon Involvement with implementation in community	E E E I I G C
	N5	<b>Water wise</b> Design & insist on storm water capture and re-use, waste water re-use, solutions using less dams, more tanks Recycling, no use of potable water Legislate for water efficient use; in agriculture (eg. Rice in Nth Qld), grey water, retrofitting tanks, in buildings & industry. User pays, increase price to control use Grants to make plumbing/ grey water re-use All public buildings, schools, pools to have water tanks, recycle, et	E I G G C C
	N1	<b>Localisation of land use &amp; food</b> Biomass processing and revegetation technology Food mileage limits Trees not beef incentives Enabling infrastructure, education & incentives Co-operatives, local businesses + self sufficiency	E I I G C
	N2	<b>Cradle to Cradle</b> Life-cycle management, including Scope, Design, Decommissioning/ recycle (eg. AWT) Co-zoning of industries Internalisation of product cost. Lease more products Extended producer responsibility; subsidies, tax incentives, landfill levies, labelling products Education Financial penalties	E I I G C C
	P7	<b>Efficient design &amp; Material use</b> Encourage & promote research through educational campaigns, competitions & scholarships Inform Engineers of available technologies, research and cost Company schemes to reward in-house innovation Eg. Paid suggestion box, bonuses Incorporate cost of recycling & disposal in purchase price of product Compulsory Lifecycle Assessment of new products	E E I I G
	P8	<b>Production - Waste Lifecycle Regeneration</b> Research Waste Disposal - what can't be re-used now, look abroad. Innovation & break barriers Take responsibility. Act locally. Co-generation. Realise reciprocal benefits. Share resources & waste. Waste Trading New policies & workgroups. Local taskforces Co-operation across councils Individual responsibility. Mindful consciousness. One planet, one civilisation.	E I I G G C
	Theme	Opportunity	Call to Action / Recommendation
3. Urban infrastructure	N4	<b>The New Re-Inventors - Redesign urban living</b> Professions; Land planners, architects - Create space for community empowerment & knowledge sharing - Build/ develop consolidated cities Retrofit houses & buildings Academia/ Education, Media, Building Designers - as above Greenbelt- green corridor strategies Urban agriculture land protection policy Emphasis on neighbourhood. Stop urban sprawl. Consolidate urban areas Sense of place and community, stop urban alienation	E E I G G C C
	B4	<b>Increased Public Transport Uptake</b> Design new Busways if needed Redesign roadways to incorporate priority public transport Design new low/zero emissions buses + trains + trams eg mini buses for shorter local routes at night Fund extra buses, Change bus schedules Interlink Buses & trains & ferries (feeder services) Change laws on how buses operate (safety laws etc) Promote confidence in buses, security, personnel, lighting at bus stops at night Cheap/Free Public transport with buses stopping anywhere you want along the route at night time. Use the buses, "try it out for a night"	E E E G G G G G C



## Summary report of 2009 National Conference Workshop

	A1	<b>Efficient Transport</b>	<p>Design energy efficient vehicles (trains, trams, buses, cars, monorails) new efficient materials, new fuels, engines to run on alternative fuels</p> <p>Build more efficient vehicles; less powerful cards</p> <p>Build more standard cars; less choice</p> <p>Ban all petrol powered motorsports</p> <p>Apply fees/ taxes to reduce car usage; entry to CBD, incr parking tarrifs</p> <p>Subsidise public transport - plan suburbs to create easier public transport access</p> <p>Policy to buy back old cars (cash for clunkers); tax less efficient cars; incr tax on new car purchase</p> <p>Reduce car use; car pooling; use bikes and walk instead of car</p> <p>Live close to workplace/ shops</p>	<p>E</p> <p>I</p> <p>I</p> <p>I</p> <p>G</p> <p>G</p> <p>G</p> <p>C</p> <p>C</p>
	A2	<b>Urban infrastructure redesign (Transit Oriented Developments)</b>	<p>Develop and apply new needed skills in profession</p> <p>Urban planning for access to public transport, bikeways, covered walkways, communal bikes</p> <p>Learn from, invite and demonstrate successful cities to promote and educate for innovation</p> <p>Be proactive with Govt, offering specific skills</p> <p>Planning approvals; rezoning for mixed use development</p> <p>Incentives to developesr (tax relief, planning concessions for above standards, energy efficiency)\</p> <p>Decentralised power grid design</p> <p>Educate community; demonstrate good examples done elsewhere</p> <p>Develop mixed use clusters (hub for shops, commerce)</p> <p>Communal activities (gardens, urban farms, recreation facilities)</p> <p>Local grey water, recycling, etc</p>	<p>E</p> <p>E</p> <p>E</p> <p>E</p> <p>G</p> <p>G</p> <p>G</p> <p>C</p> <p>C</p> <p>C</p> <p>C</p>
	P5	<b>Improve building efficiency</b>	<p>Compile a Manual of technologies and behaviour changes that can contribute to achieve 10 Star Water and Energy efficiency standards for All New houses and commercial buildings (&amp; retro fit buildings)</p> <p>Design and get funding to deliver training programs (for Architects, Building Company staff, developers &amp; local &amp; State govt. staff) on the Manual to raise awareness and embed 10 Star efficiency standards &amp; their economic feasibility</p> <p>Take a solution oriented approach to this new regulation - Cooperate with Govts to help design and implement the 10 Star regulation</p> <p>Help educate the community (commercial and domestic buildings) of the need for the regulation, the costs and how it is achievable. (Treat this as an opportunity for new markets and gain greater market share for new movers)</p> <p>Cooperate to introduce an upgrade to building standard regulations to require 10 star water and energy efficiency standards for All new houses and commercial buildings, through COAG by Mar 2010</p>	<p>E</p> <p>E</p> <p>I</p> <p>I</p> <p>G</p>



## Summary report of 2009 National Conference Workshop

<i>Theme</i>	<i>Opportunity</i>	<i>Call to Action / Recommendation</i>		
<b>4. Regulatory and Price controls</b>	A4	<b>Government leverage</b>	Be more vocal in representing the problems and solutions to Government Increase accountability and penalties to pay for inefficiencies in energy & resource use. Fund renewable R & D Bite the bullet; listen to experts (like Prof Ian Lowe) Start with children because they influence parents; Education on env impact of our lifestyle	E I G G C
	B2	<b>Market Based Mechanism</b>	Appropriate costing for alternate products Honest Broker EA to scope real costs for community Legislate for strong clear long term carbon reduction	E E G
	B7	<b>Fair Dinkum Resource Costs</b>	Implement identify and seek best solution Comply: pays real cost tax, passes on with real price to consumer Legislate real cost of resource, externalities identified & taxed & redistributes the costs (tax) Call for action: the pricing structure for a resource (energy, water, materials) needed to accurately reflect the real cost of supply	E I G C
	A6	<b>Money matters - price signals</b>	Raise awareness of price signals and price controls with Engineers & others. Encourage innovation Name & shame Carbon tax on GHG emissions to drive market response R & D Grants. Industry grants & tax breaks encouraging innovation Educate/ raise awareness about alternative energy sources. Stimulate political action	E I G G C
	N7	<b>Carbon tax and Global equitable allocation</b>	Model how the new system will work, provide options Lobbying & advocacy Respond & adjust; energy efficiency solutions Financial disincentive to pollute + financial incentive to reduce pollution Invest in distributed generation	E E I G G
	P1	<b>Carbon tax</b>	n/a Industry is main receiver of tax. However CPRS can effectively reduce overall costs Must implement the tax at rate that corresponds to a safe level of CO2 ppm in atmosphere. A tangible economic cost like a carbon tax will positively effect citizens through buyer behaviour and brick wall exposure to effects of climate change	E I G C
	B9	<b>Rationing – Demand Management</b>	Embedding Sustainability in professional practice & education, e.g. "set & forget" designs pay for whole life costs Use different mechanisms to achieve e.g. PPPs Change building codes Mandate whole life costs Mandate on E & Res's Consumption & Reduction (Rationing) Mandate time of use changing; roads, public transport. Carbon rationing Resource rationing (e.g. water) Smart metering (e.g. real time consumption monitors)	E I I G G G G C C C
	A3	<b>Energy socialists - ration/ quota</b>	Establish standards for alternate energy sources Design monitoring and enforcement mechanisms that drive mitigation Increase efficiency - reduce energy output Implement policy and audit Establish non compliance consequences Reduce consumption Increase efficiency and replace low efficiency products	E E I G G C C
	P2	<b>Rationing - A carbon card</b>	Smartcard - Linking carbon printout with integrating into efficient technologies. Judged on carbon effectiveness of projects Agriculture, Nox+CH4 emissions. Tie Corporate Exec salaries to carbon emissions. Reporting held into conditions of publicly listed companies. Inventors Aid - Reduce risks for Corporates to take on inventors; "Make it S" campaign Carbon points (like Frequent Flyer points) Marketing campaign Carbon Ration Card/ E-Card. Carry with you and when purchasing petrol, etc, carbon is accounted. Can offset card with renewable energy. Reduce tonnage per yer per person	E I I I G C



## Summary report of 2009 National Conference Workshop

Theme	Opportunity	Call to Action / Recommendation		
5. Community Awareness and Engagement	B6	<b>Agents for Change</b> (communicating the sense of urgency for immediate action)	Put forward solutions for implementation, providing technical information dump "sustainable development" introduce SUSTAINABILITY Adapt to sustainable/low carbon technology Lobby for tax incentives Recognise the need for bi-partisan support Respond to voter needs Responsibly plan for the future & legislate accordingly Insert "limits to growth" in the constitution	E E I I G G G G
	P4	<b>Democratise; erode boundaries, open info. flows &amp; involve all stakeholders</b>	Place more value on innovation Provide education to the community Regulate Get people involved Provide information & opportunity for action	E E G C C
	B1	<b>Carbon Warriors</b>	Rule book to play game & adjudicate Teams forming across sectors All Australians to reduce their footprints collectively Game based approach to engage community support Sponsors, champions, communicators Multiple Focus projects Klean up Australia but with prize money People Power – Create a carbon warriors scheme for every industry, school etc with \$100,000 prizes nationally in every sector for their Carbon Reduction Achievement Create Hall of Fame, Australian of the Year	E I C C C C C C C
	A8	<b>Carbon truth</b>	Research and provide facts on true carbon costs of everything Should embrace economic opportunities with low carbon marketing gC/100g labelling system, earth rating, black balloon rating Legislate appropriate costing of carbon on all goods and services	E I G G
	B3	<b>Changing Community Values</b>	Educate clients, governments, co-workers, other industries Product stewardship Take advice from profession & regulate Green Advertising Campaign Education program & labelling whole of life costs Rating products (independent website) Redefine abundance	E E G C C C C
	A5	<b>Mindset shift from Growth to Sustainability</b>	Educate on sustainability & LCA; arithmetic of growth, targets and standards Seek champion for new sustainability business model Implement policy and standards defining sustainability	E I G
	N3	<b>Reduce consumption</b>	Engineering for whole of life cycle "Cradle to cradle"; Design for efficiency, mandatory back-compatible design (repairable) Public outreach & communication Triple bottom line; economic/ social/ environmental Repair/ retrofitting/ recycling in industry Minimise packaging Legislation & regulation to subsidise/ penalise; Heavy taxes on waste Car pooling/ sharing resources (eg Lawnmower) Ban advertising. Media messages about consumption Redefine happiness	E E I I I G C C C

