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## Introduction

The Northern Alliance for Greenhouse Action was formed in 2002 as an informal network that shares information, coordinates community based emission reduction activities and cooperates on the research and development of innovative corporate emissions projects.

NAGA's founding members are the Cities of Banyule, Darebin, Hume, Moreland, Whittlesea, Nillumbik Shire Council and the Moreland Energy Foundation Limited (MEFL); in early 2006, the Cities of Manningham, Melbourne and Yarra joined NAGA.

In April 2005 the Victorian Government released the Victorian Greenhouse Strategy Action Plan Update, which provided funding under the Greenhouse Regional Partnership Program for NAGA to expand the Alliance's work on local greenhouse issues, by providing funding for the employment of a coordinator. NAGA appointed a Coordinator in August 2005 with its first round of DSE funding. This report covers the period of the second round of funding under the Regional Partnerships Program, February 07 - January 08.

## NAGA Members and Project Partners

NAGA developed a Membership and Recruitment Strategy in 2005. The Strategy identified the following categories for involvement in NAGA:

1. *NAGA Committee Members* participate at a Committee level and have responsibility for guiding the development of NAGA and ensuring the terms of the DSE contract are met;
2. *NAGA Project Partners* are non-Council organisations that work with NAGA on particular projects;
3. *"Fellow Travellers"*, organisations with whom NAGA has a relationship, but with whom NAGA is not actively working on projects;
4. And, over time, a *NAGA Network* of NAGA partners and other interested organisations to help further community emission reduction in the northern suburbs.

NAGA members believe that the current NAGA membership of 9 northern metropolitan Councils and Moreland Energy Foundation provides a strong, resilient alliance; its current size is appropriate for its functionality, interests and activities, and it is not seeking to add additional members.

NAGA is continuing to establish and maintain linkages and partnerships beyond the local government sector through project implementation and sharing of information and resources. Recent NAGA work in fostering networks and linkages with potential project partners includes staff from state and federal government departments (including DSE, SV, AGO), local government and industry associations (e.g. MAV, ICLEI, NECA and the North-East Neighbourhood House Network), community groups (including a number of Community Climate Action Groups), and consultants (e.g. the Environment Shop).

The NAGA Coordinator has assisted other newly forming regional alliances and councils investigating membership of regional alliances; and is an active participant in regular Regional Coordinators' meetings.



Metropolitan Local Government Areas, NAGA region indicated in green

<b>NAGA members</b>	<b>Municipal vital statistics<sup>1</sup></b>
Banyule City Council	area 62km <sup>2</sup> , population 119,347 established residential municipality, low-medium cultural diversity
Darebin City Council	area 54km <sup>2</sup> population 129,114 municipality spanning inner-city, established suburbs & relatively new residential areas, high cultural diversity
Hume City Council	area 504 km <sup>2</sup> population 151,984 municipality with established residential areas, industry, rural areas and future growth areas, high cultural diversity
Manningham City Council	area 114 km <sup>2</sup> , population 108,792 municipality with well-established, residential medium density to large-lot non-urban areas, parklands and open space, high cultural diversity
City of Melbourne	area 37 km <sup>2</sup> , population 76,678 capital city municipality with business, administrative, cultural and recreational hub; residential revitalisation and urban consolidation, high cultural diversity
Moreland City Council	area 51 km <sup>2</sup> , population 142,325 largely residential, highly developed municipality, with high cultural diversity
Nillumbik Shire Council	area 430 km <sup>2</sup> , population 62,022 municipality spanning urban & rural areas, including remote bush properties, low cultural diversity
City of Whittlesea	area 489 km <sup>2</sup> , population 124,647 municipality with major growth areas, as well as rural areas (farming & grazing; forest & conservation reserves), high cultural diversity
City of Yarra	area 20 km <sup>2</sup> , population 73,501 inner metropolitan municipality with historical industrial, working class presence, public housing estates; more recent gentrification, medium-high cultural diversity
Moreland Energy Foundation	MEFL is an independent not-for-profit organization established by the Moreland City Council to help reduce the Moreland community's greenhouse gas emissions.
	<i>total area of NAGA region</i> <span style="float: right;"><i>1762km<sup>2</sup></i></span> <i>total population of NAGA region</i> <span style="float: right;"><i>988,410</i></span>

<sup>1</sup> Population figures based on 2006 Census data.

<b>NAGA Project Partners and Stakeholders</b>	<b>NAGA involvement</b>
other Regional Greenhouse Alliances: CVGA, WPGA, NEGHA, SWSP, WAGA	Informal information sharing and resourcing; quarterly meetings
Department of Sustainability and Environment	Funding to NAGA under the Regional Partnerships program; DSE's Regional Greenhouse Officer's attendance at NAGA meetings; coordination/liaison with Regional Coordinators' quarterly meetings; Accord Funding; provision of information and resources, including impacts and adaptation, etc; Sustainability St – member of Working Group Streetlighting projects partner
Sustainability Victoria	Coordination/liaison with Regional Coordinators' quarterly meetings; local government programs; Streetlighting project – VSPLAG member, technical input; Accord funding – contract administration
ICLEI	Coordination/liaison with Regional Coordinators' quarterly meetings; Streetlighting project – VSPLAG member, technical input
Municipal Association of Victoria	Coordination/liaison with Regional Coordinators' quarterly meetings; Streetlighting project – VSPLAG member; local government liaison
Dept of Planning and Community Development	Sustainability St – provision of funding, member of Working Group
Electricity Distribution Businesses	Streetlighting Project – technical input, liaison re establishing costs in VSPLAG process
The Environment Shop	Sustainability St - presentation to training course, provision of innovative energy efficiency materials
Essential Services Commission	Streetlighting Project – regulatory context/input
National Electrical and Communications Association	EcoSmart Electricians project – NAGA is a member of NECA's Steering Committee for the project
North East Neighbourhood Houses Network; Jika Jika Neighbourhood House	Ecoliving Demonstration Centre project - NAGA is a project supporter
RMIT – Centre for Design	Carbon Neutral Communities – NAGA is an industry partner; RMIT is a project partner in NAGA's Towards Zero Net Emissions project
Victoria University	Sustainability Street project – evaluation
Village Green	VIC 1000 project – implementation
Vox Bandicoot	Sustainability Street project – implementation
Yarra Valley Water	Sustainability Street project – provision of in-kind support; water efficient materials to project participants Vic 1000 project – level 2 supporter
federal Australian Greenhouse Office	Provision of information and resources; Streetlighting Project – technical input, regulatory context/input
Adjunct Professor Alan Pears	Provision of information and support
Clean Energy Council	Occasional organisation of seminars; local government forums

## **Communications**

NAGA has drafted a Communications Strategy to guide priorities and implementation of NAGA Communications (see attached).

A major communication vehicle for NAGA is its website. The website exists either as a stand-alone site accessed through [www.naga.org.au](http://www.naga.org.au) , or as a page hosted by the MEFL website, when accessed through [www.mefl.com.au/naga](http://www.mefl.com.au/naga) .

The website includes details of NAGA's current projects, and links to NAGA members, project partners, stakeholders and other regional alliances. Many of NAGA's reports can be downloaded from the site. The website also includes a function for contact with the NAGA Coordinator. The website is regularly updated by the NAGA Coordinator.

## **Quantification**

All of NAGA's projects undertaken over the course of this funding period (Feb 07 – Jan 08) are ongoing, with completion due over the next 18 months. Quantification results are therefore not yet available but will be reported as projects are completed.

## Projects and Funding

### Details of project funding

NAGA has attracted significant levels of funding from various sources to supplement DSE funding and enable implementation of NAGA's projects. The funding for project implementation is listed below. Details of the NAGA projects undertaken over the course of this funding period are included in the following sections.

project	description	duration	funding	NAGA members and project partners
<b>1: Residential sector:</b> <i>Sustainability Street Northern Metro Community Greenhouse Action.</i>	Establish 18 'Sustainability Street' communities, to engage and build sustainable living and community strengthening capacity	Jan 06 – Dec 08	Community Support Fund \$500,000 NAGA Councils \$30,000 in-kind contributions (incl. community) \$1,063,000	MEFL, Darebin, Moreland, Melbourne and Whittlesea DSE, Vox Bandicoot, Victoria University, Yarra Valley Water
<b>2: Small Business Sector:</b> <i>Vic1000 Sustainable Business Management</i>	Train small businesses in environmentally sustainable management practices, focusing on waste, water, energy and transport; build community capacity in sustainable business management.	Jan 07 – Dec 07	Per Region: Sustainability Fund \$180,000 Matching sponsorship \$145,000 NAGA Councils \$35,000	Banyule, Darebin, Hume, Manningham, Melbourne, Moreland, Nillumbik and Whittlesea Village Green
<b>3: Energy Efficiency / Corporate emissions sector:</b> <i>Streetlighting</i>				
<i>3.1 NAGA 2006-9 Public Lighting Action Program</i>	Through the creation of Sustainable Public Lighting Action Plans for NAGA member councils, build capacity to deliver large scale public lighting improvements.	Oct 06 – Jun 09	Sustainability Accord \$143,000 Councils in-kind \$67,500	NAGA member Councils, Ironbark Sustainability SV, DSE, ICLEI, MAV, other Regional Alliances
<i>3.2 NAGA 2006 – 2009 Public Lighting Action Program: Stage 2</i>	Developing a strategic state-wide business case for changeovers to sustainable lighting Testing of streetlighting control gear	Oct 07 – Jun 08	Sustainability Accord \$50,000 Councils in-kind \$14,000	NAGA member Councils, MEFL, Ironbark Sustainability DSE
<i>3.3 Bright Sparks bulletins</i>	6 issues of the Streetlighting bulletin to provide updates on technologies and in-street trials, advances in regulatory arrangements, and opportunities for installation in new developments and metered sites		Sustainability Victoria \$7,000 MEFL in-kind \$7,000	NAGA, Ironbark Sustainability SV, ICLEI
<i>other NAGA Streetlighting initiatives:</i>	VSPLAG Victorian Sustainable Public Lighting Roadmap Trials and reporting	ongoing	NAGA funding	NAGA member Councils, Ironbark Sustainability, DSE Accord

project	description	duration	funding	NAGA members and project partners
<b>4: Research project:</b> <i>Towards Zero Net Emissions in the NAGA Region</i>	Research a regional zero net emission target, including quantification of regional emissions (baseline data); opportunities for emissions mitigation; and for local government involvement in offsets provision	Dec 07 – Jun 09	Sustainability Accord \$180,000 NAGA \$30,000 Councils in-kind \$30,000	NAGA member Councils Shire of Wellington RMIT Centre for Design
<b>5. Energy Services Sector Development:</b> <i>Green Electricians</i>	NAGA pilot project delivering energy efficiency training to electricians; the pilot contributed to the establishment by NECA of the national EcoSmart Electricians training and accreditation program.	Oct 05 – May 06	Australian Greenhouse Office \$25,000 NAGA \$5,000 NAGA member Councils in-kind	NAGA member Councils National Electrical and Communications Association (NECA)
<b>6. Research project:</b> <i>Carbon Neutral Communities: Making the Transition</i>	Research strategies to address non-technical barriers to achieving carbon neutrality in the residential sector	Apr 07 – Mar 10	Australian Research Council Linkage Grant \$245,330 RMIT University \$181,009 Partners cash and in-kind \$363,000	RMIT Centre for Design, Uni of SA, NAGA, Manningham City Council, Community Power, MEFL, ICLEI, Consumer Affairs Victoria
<i>7. Promoting Sustainable Homes - Eco Tools for Real Estate Agents</i>	<i>Improving the energy efficiency of housing stock by supporting real estate agents' skills development (including promotion and marketing of sustainability features) as the key intermediaries in the sale and rental process.</i>		<i>Application to Sustainability Fund; successful applicants not yet announced</i>  <i>Sustainability Fund \$60,000</i> <i>Project partners in-kind \$16,000</i>	<i>MEFL, NAGA member councils, AGO, REIV</i>
<i>Northern Metro TravelSmart project</i>	Increase the use of sustainable transport through delivery of small scale travel behaviour change initiatives.	Jan - Dec 06	Councils and DSE: matching funding	Banyule, Darebin, Hume, Moreland, Nillumbik, Whittlesea Councils
<i>Other NAGA members' projects</i> <i>(Although not formally delivered under the NAGA banner, these project partnerships comprising NAGA members reflects the significant role that NAGA plays in facilitating linkages and partnerships.)</i>	Some of these other projects include: <ul style="list-style-type: none"> <li>• Sustainable Homes project led by Darebin Council;</li> <li>• Accelerating Sustainable Building in Local Government (ESD) project led by Manningham Council (Accord funding);</li> <li>• Walking the Talk Public Lighting led by Darebin Council (AGO funding);</li> </ul>			

## **NAGA Project 1: Residential sector**

### **Community Support Grant – Strengthening Communities – Sustainability Street Northern Metropolitan Melbourne Community Greenhouse Action.**

Funding: Community Support Fund grant	\$500,000
Councils' Sustainability St Licences	\$30,000
In-kind contributions	\$1,063,000
<i>(NAGA Coordinator, NAGA Councils, local communities, Yarra Valley Water)</i>	
<b>TOTAL</b>	<b>\$1,593,000</b>

Project Duration: January 06 – December 08

Partners: NAGA, Vox Bandicoot, Victoria University of Technology, Yarra Valley Water.

The project will be delivered by the Sustainability St Coordinator (based at MEFL) and Vox Bandicoot, within the municipalities of Darebin, Melbourne, Moreland and Whittlesea. Evaluation of the project will be undertaken by Victoria University, with input from the project's Working Group, whose members are drawn from DVC, DSE, VU, NAGA and Council officers.

#### Project description:

Formation of a thriving network of 18 Sustainability Street community groups throughout the Northern Metropolitan Melbourne region over a three year period, to engage and build sustainable living and community strengthening capacity. The program will target households in 12 local areas within the NAGA region in the first 18 months of the project, with a further 6 communities recruited in the final 18 months of the project.

#### 1. Production of Sustainability Street Kits:

Vox Bandicoot will consolidate Sustainability Street community building and strengthening tools and content into an easy-to-use Sustainability Street Kit

#### 2. Coordinator Employment & Capacity Building:

A Sustainability Street Coordinator will be employed by NAGA; the Sustainability Street *Train the Mentor* Program will be delivered by Vox Bandicoot to the Sustainability Street Coordinator, NAGA members and pre-existing Sustainability Street groups in the NAGA region.

#### 3. Community Capacity Building and Strengthening

Sustainability Street Coordinator (with support from Vox Bandicoot) will facilitate the establishment of 12 Sustainability Street community groups across the NAGA region during the first phase of the project. Six new groups will be established across the NAGA region in the second phase of the project. These groups will be co-mentored by first phase communities and by the Sustainability Street Coordinator. The Coordinator will facilitate a regional event to encourage regional networking and sharing of ideas and experiences.

#### 4. Evaluation of Community Strengthening & Sustainability Outcomes

Victoria University will design and implement evaluation methodology in collaboration with Vox Bandicoot and NAGA.

#### Project outcomes:

- To achieve quantifiable greenhouse abatement
- To consolidate Sustainability Street community strengthening and sustainable living tools and content into an easy-to-use Street Sustainability Kit.
- To train a Regional Coordinator to assist communities in planning their own sustainable future.
- To create sustainable community groups who are passionate about their community and ecological sustainability, and thinking more often about a clean, green sustainable future.
- Train the Mentor capacity building for council officers and community members.
- Stronger partnerships and collaboration between Councils, community groups, and service organisations focused around sustainability.
- To develop and integrate evaluation to measure the Sustainability Street Approach capacity to deliver community building and environmental sustainability outcomes at the individual, street and wider community level.

Progress to date:

Most Stage 1 groups have now graduated and are working almost autonomously. They are continuing to be fairly active, running seminars, self-auditing, and planning future projects. Some of their activities are listed below:

- Preston has held a grey water and pump sizing seminar. It is also continuing its push to adopt a local park. The group usually meets for a communal dinner of Fridays.
- Union St has started self-auditing of energy consumption with a Powermate bought through Seed Funding.
- Walton Ave is planning a Meet the Street Day on 30 March 08.
- Butler Grove has been working on energy auditing.
- Carlton is starting to compile a local Sustainability Directory
- Parkville is planning to stage a street party

The Stage 2 groups have all formed and workshops and other activities are well underway:

- Lalor (Whittlesea) – based with a group of former refugees. The group has built a community garden and is now starting to utilise the garden area as a teaching space.
- Aurora (Whittlesea) – working with the residents of Melbourne’s newest sustainable suburb to enhance sustainability and a sense of community.
- Merlynston (Moreland) – already working as a strong community.
- Newlands (Moreland) – came together for the first time in late Feb with a get-to-know-you BBQ for 60 former strangers. One of the first groups that has a built-in venue at the local Community Centre, rather than moving between people’s houses.
- Merri Corner (Moreland) – interesting group whose members have good enviro knowledge. Sustainability St has helped them to engage with a wider community. Planning a local community garden.
- Methven (Moreland) – Small group in Brunswick, based mainly around Methven Park. Hold every second meeting in the park to promote the idea to the wider community.
- East Melb (Melbourne) – The group is based in East Melb Library.

Project evaluation is continuing, with interviews of existing groups, and evaluation of new groups underway, and the Working Group has continued to meet regularly.

<b>municipality</b>	Phase 1 Communities formed in 2006	Phase 2 Communities formed in 2008
Darebin	Sumner Estate Northcote Westgarth St Northcote Union St Northcote Thames St Northcote Shaftesbury Pde Thornbury Walton Ave Preston East Preston Fulham Rd Alphington	
Moreland	Butler Gve East Coburg	Merlynston Methven Park Brunswick Merri Corner East Brunswick Newlands
Melbourne	Carlton Parkville	East Melbourne
Whittlesea	Laurimar Estate Doreen	Lalor Burundi Community Aurora

## **NAGA Project 2: Small Business Sector**

### **Vic1000 Sustainable Business Management Program**

Partners: Village Green, NAGA, local traders groups

Project Duration: January – December 07; extended to August 2008

Funding: Sustainability Fund (per region)	\$180,000
matching sponsorship (per region)	\$145,000
Councils' contribution (\$3,500 for delivery to 20 businesses)	\$35,000
<b>TOTAL (per region)</b>	<b>\$360,000</b>

#### Project Description:

Village Green received funding from Sustainability Fund Round 1 for a 3 year project to train 1000 small and medium sized enterprises across the state in environmentally sustainable management practices, focusing on waste, water, energy and transport. The program has a strong focus on building community capacity to sustainably manage their businesses and realise cost savings. The project is being delivered in 5 regions, with delivery in each region over a 12 month period.

The program is being delivered across the northern metro region beginning in 2007. Eight of NAGA's nine member Councils are involved in the project, as well as the City of Boroondara.

#### Objectives and outcomes:

- quantified reductions in resource use;
- implementation of retrofits/energy efficient appliances;
- sustained behavioural change;
- increased local involvement

#### Performance indicators:

- number of participants;
- quantifiable reductions in resource use and emissions;
- ongoing involvement by participants

#### Progress to date:

##### **Recruitment and Engagement**

220 businesses across 8 NAGA municipalities and one non-NAGA municipality have been recruited to participate in Vic 1000 metro North region.

<b>municipality</b>	<b>no of participating businesses</b>	<b>dates of sign-on</b>
Banyule	20	17/04/2007 - 6/06/2007
Darebin	15	28/2/2006 - 3/10/2007
Hume	32	3/1/2007 - 6/08/2007
Manningham	38	2/01/2007 - 12/06/2007
Melbourne (CBD)	24	23/05/2007 - 13/08/2007
Moreland	19	17/04/2007 - 6/06/2007
Nilfumbik	18	31/01/2007 - 06/08/2007
Whittlesea	16	24/01/2007 - 30/05/2007
Boroondara	38	22/04/2007 - 14/06/2007
total	220	

Participating businesses received a Welcome Kit, and invitations to the workshops. Pre-retrofit audits were undertaken; audit results are presented to the businesses in the Assessment A reports.

Due to on-going technical difficulties with the reporting software, the production and distribution of the Assessment A reports was delayed. Printing and distribution of the reports is now scheduled from Thursday 13 March to Monday 17 March, 2008. At this stage, the project in the Metro North region is scheduled to be completed by 31 July 2008.

Following distribution of the Assessment A reports, participating businesses will be revisited in late March and early April in the municipalities of Moreland, Hume, Banyule, Darebin, Nillumbik and Boroondara. Additional recruitment visits will be scheduled for the municipalities of Whittlesea, Manningham and Melbourne.

### **Workshops**

The Metro North Village Green workshops were delivered from March - November 2007. Workshop topics were: Sustainable Business Management, Energy, Water and Waste, Transport and Chemicals, and Green Marketing

The Office of Small Business will be offering three additional Business Management Workshops in April to project participants. Village Green will promote the workshops with a mailout to participants.

### **Retrofits**

It is planned to retrofit businesses involved in the program from late April – early May. Village Green will be using an experienced environmental maintenance contractor and plumber. In addition, greater emphasis by Village Green on the mentoring process will hopefully lead to increased outcomes based on audit results and recommendations.

### **Audit Assessment B**

Following installation of retrofits, on-site Assessment B audits will be undertaken between late May and July. The Assessment B reports will be produced and distributed by Tuesday 29 July, 2008:

### **Marketing & Communications**

Business participants have all received branded reusable bags and shop front stickers, as well as receiving multiple copies of Sprinkla magazine <http://www.sprinkla.com/> (produced in partnership with Village Green) for distribution to their customers. Launches of the program have been organised within each participating municipality.

The use of large format posters individualised to each trader's set of actions is also being trialled. These will be posted in each participating business, serving to remind staff that they are participating in the programme as well as being a tool to gain commitment to action.



## **NAGA Project 3: Energy Efficiency / Corporate emissions sector: NAGA Streetlighting projects**

### **3.1 NAGA 2006-9 Public Lighting Action Program**

Funding: Sustainability Accord	\$143,000
Partner in-kind contributions	\$67,500
<b>TOTAL</b>	<b>\$210,500</b>

Project Duration: October 06 – June 09

Partners: Darebin City Council, other NAGA Councils, Ironbark Sustainability Consultant liaising with Sustainability Victoria, Department of Sustainability and Environment, ICLEI, MAV, Essential Services, Electricity Distributors, other Regional Partnerships

Project Description: Through the creation of Sustainable Public Lighting Action Plans for each NAGA member council: Banyule, Hume, Manningham, Melbourne, Nillumbik, Whittlesea, Moreland, Darebin and Yarra – this project will build capacity within local government to deliver large scale public lighting improvements in Melbourne's north.

Objectives and Outcomes:

1. Sustainable Public Lighting Action Plans (SPLAP) for 7-8 Councils & separately for region.
2. Displays & presentation of SPLAP to each Council.
3. Support work with Essential Services Commission (ESC), regional alliances & distributors around economic side of Sustainable Public Lighting.
4. Work closely with council engineers, planners & finance officers to build capacity internally to deliver large scale changeovers.
5. Work with outside bodies in Sustainability Victoria (SV), Department of Sustainability and Environment (DSE), ESC, distributors, regional alliances to make large scale changeovers possible.

Progress to date:

- Commitment of participation from NAGA member Councils.
- Two Regional workshops have been held to gather input into the Regional Sustainable Public Lighting Action Plan; the NAGA Regional SPLAP has now been finalised, adopted by NAGA and is downloadable from NAGA's website [http://www.naga.org.au/documents/NAGA\\_FINAL\\_SPLAP.pdf](http://www.naga.org.au/documents/NAGA_FINAL_SPLAP.pdf)
- Seven draft SPLAPS prepared (Regional, Darebin, Moreland, Yarra, Whittlesea, Hume, Manningham) and additional workshops held with four Councils to assist with SPLAP finalisation. Each Council has slightly different completion and approval processes and these are being pursued by Council contact officers.
- OMR consultancy by Syneca – final draft completed
- Guidelines for new developments are being drafted
- Preparation of the regional finance model has begun.

### 3.2 NAGA 2006 – 2009 Public Lighting Action Program: Stage 2

Funding: Sustainability Accord	\$50,000
Partner in-kind contributions	\$14,000
<b>TOTAL</b>	<b>\$64,000</b>

Project Duration: October 07-June 08

Partners: Banyule City Council (lead agency), other NAGA Councils, Consultants: Ironbark Sustainability, Ray Simms, Paul Murfitt/MEFL;  
liaising with Sustainability Victoria, Department of Sustainability and Environment, ICLEI, MAV, Essential Services, Electricity Distributors, other Regional Partnerships

#### Project Description:

The NAGA PLAP: Stage 2 project is aimed at enhancing Victorian Councils' ability to progress sustainable public lighting. It is designed to build upon the work achieved in Stage 1 of the project and the SEAV SPLI program in 2004/05, by:

- Carrying out testing that is required to develop maintenance charges for energy efficient lights and develop recommendations around various control systems for public lighting; and
- Developing a strategic state-wide business case for changeovers to more energy efficient lighting, which, if implemented, would result in annual energy savings of about 17 gigajoules (representing 27,000 tonnes of CO<sub>2</sub>e annually in the NAGA region alone) and significant cost savings on the \$40 million that is spent on public lighting annually by Victorian Councils.

#### Objectives and Outcomes:

The project's outputs will be the following:

1. Test Report outlining electronic control gear temperature sensitivity, comprehensive Photo-Electric (PE) cell testing (including efficiency on/off life, light sensitivity (all building on SPLI funded trial in 2005)) and investigating options for control of high wattage lighting (including electronic control gear, active reactor and others);
2. Strategic State-wide Business Case will present three scenarios for a way forward for Victorian Councils to deliver energy efficient public lighting. It will consider regulatory implications, current technologies, performance, greenhouse and financial costs and benefits, amongst others.

#### Progress to date:

##### 1. Technical testing

The following testing systems have been fully calibrated and installed at the Banyule Parks Depot by Ironbark Sustainability and their subcontractors:

- 4 streetlights (two x Twin 14W T5 Fluorescents, two x 42W Compact Fluorescent Lights) with electronic control gear and data logs to record peak temperatures on the control gear;
- Replacement of 16 of the 32 current PE cells with different types of cells.
- Other PE cell test systems have been calibrated off-site and are currently undergoing initial testing prior to full integration into the testing program.

These tests are to collate information for the following outcomes:

- Analysis of control gear temperature sensitivity – especially through the height of summer – to feed through Victorian Sustainable Public Lighting Action Group into the Operation, Maintenance and Replacement price-setting for the new lighting types – T5s and CFLs;
- PE cell on/off switching (to measure the life of the units), efficiency (in particular analysis of the accuracy in relation to daylight hours) and light sensitivity to aid identification of a preferred PE cell technology.

Desktop research has commenced to analyse:

- Sophisticated lighting control options for streetlighting;
- Analysis of the Active Reactor technology and to determine if there are any other currently available options to achieve a similar control of high wattage lighting systems.

##### 2. Strategic Statewide Business Case

The consultant has been appointed, and surveying and collection of streetlighting data from Victorian Councils will commence in March 08, with the final report due by June 08.

### 3.3 Other NAGA Streetlighting initiatives

#### Bright Sparks

NAGA has a contract with Sustainability Victoria to produce 6 issues of the Bright Sparks Streetlighting bulletin. The bulletin, whose audience includes local government's asset managers and greenhouse officers, electricity distribution businesses, local government associations, some regulators and manufacturers, and consultants/experts, aims to provide updates on technologies and in-street trials, advances in regulatory arrangements, and opportunities for installation of efficient technologies in new developments and metered sites. The 1<sup>st</sup> issue was circulated in June 07, the 2<sup>nd</sup> issue in October 07, and the 3<sup>rd</sup> issue due for circulation in March 08. The bulletins are circulated by ICLEI's Public Lighting Manager, and can be downloaded from the National Public Lighting Toolbox website <http://www.iclei.org/index.php?id=6466> and from NAGA's website <http://www.naga.org.au/naga/project/152/>.

#### VSPLAG

The Victorian Sustainable Public Lighting Action Group (VSPLAG) formed in mid 2006 to facilitate installation of energy efficient street lighting. VSPLAG brings together the Victorian Regional Alliances, their member councils, Municipal Association of Victoria (MAV), Sustainability Victoria, Essential Services Commission and the Distribution Businesses. VSPLAG consists of 2 groups: the Pricing Group and the Technical Group. The Technical Group has been meeting throughout 2007 to progress technical and design issues with the 2 technologies under consideration: T5s and 42W CFL. As part of this process, Distribution Businesses have also been meeting with lighting manufacturers to work through design and maintenance issues. Final technical approval of the T5 is likely in late February. Once technical approval for this lighting has been provided, the VSPLAG Pricing Group will meet to table draft Operation, Maintenance and Repair (OMR) charges and bulk changeover charges. It has been agreed that an Essential Services Commission review will then be initiated; this review may take up to 9 months.

#### Victorian Sustainable Public Lighting Roadmap

Efforts to improve sustainability of streetlighting have to date focused on technologies; design solutions; changes to operation and maintenance, and purchase of GreenPower. A *Strategic Roadmap* has been developed by NAGA to identify critical strategic needs:

- consolidation of technical data, including final reports on demonstration trials;
- costing/finance models;
- strategies for fostering collaboration and involvement of distribution businesses, State Government agencies, and Councils;
- key milestones, including timing, relationships and dependencies.

A risk management approach was used to identify major obstacles to sustainable public lighting provision and develop responses. As part of this process, the key stakeholders and their respective roles were identified, and risks were defined from their perspectives. Potential response measures were proposed:

##### Financial:

- Current cost formula clarified, tested and alternatives proposed;
- State-wide Business Case developed, including life-cycle costing

##### Administrative:

- Process for the technical approval for new technologies agreed by all parties
- Product range defined and overall costs (including O&M) agreed

##### Strategic:

- Stakeholder agreement regarding priorities and actions
- National co-ordination on action

##### Technical:

- Performance parameters clarified and agreed, applied to currently available SPL products
- Capacity building program underway

The **key activities** include:

- The Victorian Sustainable Public Lighting Action Group (VSPLAG)
- The development of a Victorian SPL Business Case
- Technology review
- MOUs between key stakeholders
- Agreement with Federal Government with regard to roles and responsibilities

The Strategic Roadmap proposed that these measures are undertaken within a strategic framework that would be a formalised partnership between the Victorian distribution businesses, the State Government and local governments. DSE's Victorian Local Sustainability Accord Team considers the establishment of a high level group to be an appropriate vehicle to drive these actions and is currently discussing this option with the Victorian Government.

### **Trials and reporting**

NAGA has funded preparation of a final report by Ray Simms and Kevin Poulton on the NAGA/AGL Lighting Demonstration trials that were carried out by in the northern region of Melbourne from 2004-07. The program installed 120 trial lights across five NAGA Councils (Banyule, Darebin, Hume, Moreland and Whittlesea) and Maribyrnong Council. The trials were aimed at testing the field performance of energy efficient lights that can replace the existing 80W Mercury Vapour technology.

The report includes results on comparisons of energy and greenhouse savings, maintenance issues and spacing required to meet Australian Standards. The report is available at:

[http://www.naga.org.au/documents/NAGA-AGL\\_SPL\\_demo\\_trial\\_final\\_report.pdf](http://www.naga.org.au/documents/NAGA-AGL_SPL_demo_trial_final_report.pdf)

NAGA has also funded regular collection of accuracy data of various types of PE cells from Banyule's test rig. GenesisNow will be collecting data bimonthly and will report on results in June 08.

## **NAGA Project 4: Research project Towards Zero Net Emissions in the NAGA Region**

Funding: Sustainability Accord	\$180,000
Partner cash contributions	\$30,000
Partner in-kind contributions	\$30,000
<b>TOTAL</b>	<b>\$220,000</b>

Project Duration: February 2008 – August 2009

Partners: Yarra City Council (lead agency), other NAGA Councils, RMIT Centre for Design, Shire of Wellington

### Project Description:

NAGA's Strategic Plan 2006 identified as a priority establishing a research project to investigate a regional zero net emission target, including consideration of quantification of regional emissions (baseline data), and opportunities for reductions through energy conservation and energy efficiency. NAGA is aware of the educational and inspirational benefits of setting iconic community reduction targets, but is reluctant to take such a step without good quality research that provides a reliable baseline and scopes the key priorities and opportunities for NAGA to make meaningful contributions towards the target.

- Municipal carbon profile - Develop a methodology to establish a carbon profile for local governments that includes baseline data and at risk sectors.
- Offsets – Research offset options for both Council and the community. 1. Investigate offset industry quality standards. Promote to the community. 2. Investigate feasibility of developing local govt offset schemes including local government partnerships (e.g. local govt purchase of local govt generated offsets, biosequestration and broking offsets to the community )

### Objectives and Outcomes:

1. Data acquisition
2. Carbon Profile (including at-risk sectors) report
3. Offsets market research
4. Offsets report

### Progress to date:

project not yet commenced; milestone details and funding agreements will be finalised in Feb 08.

## **Other NAGA initiatives**

### **Student research project**

NAGA is supervising a final year BA (International Relations) student undertaking a research project that will contribute to NAGA's Zero Net Emissions research. The student project will be completed in November 07. The student project includes the following elements:

1. Literature review of local governments (Australian and international) that have adopted a zero net emission target. Investigate different models, including how the following factors are dealt with:
  - inclusions/exclusions (e.g. waste, transport, etc)
  - key mechanisms for achieving the target - identify which are relevant to NAGA's context
  - offsets – sources/types of offsets; consideration of issues regarding local government payment for community offsets (social contract vs community ownership)
2. Consultation with northern region Councils/Councillors.
  - other councils that have established zero net emission targets
  - community ownership/consultation
  - identification of key barriers/concerns and opportunities for NAGA member Councils

**NAGA Project 5: Carbon Neutral Communities: Making the Transition**  
**RMIT Centre For Design and University of South Australia**

Funding: Australian Research Council Linkage grant	\$245,330
RMIT and Uni of SA	\$181,009
Partner cash contributions	\$87,000
Partner in-kind contributions	\$276,000
<b>TOTAL</b>	<b>\$789,339</b>

Project Duration: April 2007 – March 2010

Project Leaders: RMIT University Centre for Design, University of South Australia

Industry Partners: Manningham City Council, City of Playford (SA), NAGA, ICLEI, MEFL, Community Power/City of Darebin, Consumer Affairs Victoria

Project Description: Reducing the carbon/greenhouse-induced bases of climate change is a major challenge in a coal- and oil-powered economy such as Australia's. Such a strategy has long lead times, which makes the realisation of immediate policy impacts challenging. A range of barriers – some technical but most non-technical – need to be overcome for such targets to be achieved. Research has been conducted on the technologies and design of greenhouse gas reduction options for cities and buildings. However, three fundamental problems remain in the drive to urban carbon neutrality: (i) speed of change; (ii) community engagement with the process; and (iii) lack of capacity for change at the organisational and community level. Strategies for overcoming these non-technical barriers are addressed in this research. Many viable strategies are already available, including demand-side reductions via energy efficiency and sustainable design strategies and technologies, as well as supply-side reduction, through fuel switching or reconfiguring energy services. Emission offsetting, an increasingly popular strategy used by institutions and individuals, is also an option, along with other sequestration possibilities. However, a community can only voluntarily become carbon neutral when businesses, institutions, households and individuals choose to act in concert to reduce the overall greenhouse gas emissions of their activities and have the knowledge and skills to do so. This project posits that motivation and action competence are key aspects.

Objectives and Outcomes:

1. Identify carbon neutral potential, and social, economic, cultural and capacity barriers to achieving this potential;
2. Assess the application of established techniques to address such barriers and provide practical solutions to carbon transition;
3. Develop and test strategies for building the capacity needed to facilitate the breakthrough required in achieving carbon neutral communities by 2020, the key date in the The National Greenhouse Strategy ; and
4. Disseminate this knowledge to project stakeholders and the wider community.

Key Phases and Progress to date:

phase	details	timing
1. Preliminary Research – Literature Reviews	<ul style="list-style-type: none"> <li>• Global/national climate change context</li> <li>• Australian policy context and drivers of CNC – focus on LGAs</li> <li>• Carbon Assessment Methods – a comparative assessment of methodologies at LG scale</li> <li>• Review of responses to climate change – broad overview with focus on CNC/ energy efficiency behaviour change initiatives/programs.</li> <li>• Review of barriers to successful transition to CNC – technical and non-technical barriers</li> <li>• Role of behaviour change, institutional capacity building and education in conservation practices – theories, approaches and lessons from related fields</li> <li>• Critical evaluation of non-technical and technical interventions</li> <li>• Research Design methods</li> </ul>	April 07 – Sept 08

phase	details	timing
2. CNC Database of Initiatives, Programs etc – Primary Data Collection	<ul style="list-style-type: none"> <li>Develop and regularly update database of relevant initiatives in Victoria, SA, nationally and internally using agreed criteria developed with partner organisations</li> <li>Select initiatives for further analysis – carry out interviews with relevant agencies and participants</li> </ul>	Feb - Jun 08
3. CNC Assessment: Quantitative Analysis of Resources and Technical Opportunities	<ul style="list-style-type: none"> <li>Establishment of baseline energy consumption data in case study areas</li> <li>Energy efficiency opportunities and renewable resource assessments</li> <li>Rank carbon dioxide abatement options according to cost effectiveness and payback time.</li> </ul>	Jan - Mar 08
4. CNC Assessment: Qualitative Analysis of a Selected Range of CNC Initiatives	<ul style="list-style-type: none"> <li>Select a range of initiatives for in-depth analysis – include Partner organisations in selection process</li> <li>Prepare a descriptive analysis of initiatives</li> <li>Examine the discourse, concepts and assumptions for initiatives</li> <li>Assess outcomes of initiatives and evaluation processes</li> <li>Identify the major barriers to success of initiatives</li> </ul>	Feb - Sep 08
5. CNC Evaluation Framework	<ul style="list-style-type: none"> <li>Develop draft evaluation framework – based on literature reviews and analysis of selected initiatives.</li> <li>Assess current evaluation methods and approaches</li> <li>Carry out a trial evaluation process on selected initiatives</li> <li>Refine framework and develop as an evaluation tool or guidelines to assist in transition for CNC</li> </ul>	Jul 08 - Mar 09
6. CNC Action Research	<ul style="list-style-type: none"> <li>Review action based research design methodologies</li> <li>Involve partner organisations in research design process and case study selection</li> <li>Develop research approach and proposed timelines</li> <li>Carry out action based household research – interviews, focus groups, workshops</li> <li>Case study analysis and comparative assessment</li> <li>Refine CNC evaluation framework and guidelines based on findings</li> </ul>	Jan - Sep 09
7. CNC Communication of Project Progress and Outputs	Working papers, Conference/journal papers, Project website, CNC initiatives database, CNC Framework guidelines or principles, Workshops, Focus Groups, Seminars	ongoing

The following Working Papers and conference papers have been prepared to date:

Working Papers

Carbon Neutral Communities: Definitions And Prospects

Carbon Assessment Methods And Methodologies For Carbon Assessment At LGA Scale

Conference Papers (Solar Cities, Adelaide Feb 2008)

Carbon Profiling: An Analysis of Methods for Establishing the Local Emissions Baseline

Carbon Neutral Households: Making the transition through learning from experiences in community health

## **Other NAGA Projects**

### **Energy Services Sector Development – Green Electricians**

In late 2006, Sustainability Victoria, as part of the National Framework for Energy Efficiency (NREE) professional development project, appointed National Electrical and Communications Association (NECA) to undertake a national pilot project to develop and deliver training and accreditation in energy efficiency and energy management for practicing electricians. The pilot project was delivered in Melbourne and Sydney.

The pilot has now progressed to rollout by NECA of the national EcoSmart Electricians program providing training (focusing on energy efficiency, as well as renewable energy options) and accreditation to qualified electricians throughout Australia. Consumers can access information and referrals to accredited EcoSmart electricians via the website <http://www.ecosmartelectricians.com.au/>.

NAGA had developed a close partnership with NECA through implementation of NAGA's Green Electricians pilot project in 2005-6; NAGA is continuing to work closely with NECA in the implementation of the program, through membership of the EcoSmart Electricians Program's Steering Committee, and by providing assistance with marketing and strategic planning.

### **NAGA/BCSE Cogeneration Workshop**

Several NAGA councils have been assessing feasibility of cogeneration for some of their facilities, and so an information workshop for NAGA members was jointly organised by MEFL and the Business Council for Sustainable Energy (as part of its development of its Local Government Forum).

The Cogeneration workshop, held on 23 May 07, included presentations on Cogeneration systems and specifications, grid connection issues and solutions, and a case study of the City of Maribyrnong's recent construction of its Aquatic Centre, which incorporates a cogeneration facility.

### **Municipal Data Management**

NAGA established a Data Management Working Group to research barriers and issues to Councils' effective utilities' data management and to develop proposals to begin to address these. Data management was identified in NAGA's Strategic Plan as a key priority in addressing NAGA members' capacity needs to deliver on mission and strategy.

The Working Group's main focus is on developing standard protocols for provision of data by utilities, and enhancing Councils' utilisation of existing database software tools (including Utility Tracker's recent upgrades.)

### **Community Power**

NAGA members Darebin City Council and MEFL are members of Community Power, the community/local government program set up to make it easier and more affordable for residents to sign up to GreenPower. The original Community Power energy retailer AGL is no longer offering Community Power plans; new Community Power plans are now being offered by Origin Energy; the new plans will be launched at City of Darebin's Earth Hour event on 29 March 08.

### **Other NAGA members' projects**

NAGA members are partnering with each other to implement a number of other projects that are not formally delivered under the NAGA banner, reflecting the significant role that NAGA, as an alliance and networking forum plays in facilitating linkages and partnerships. Some of these other projects include the Sustainable Homes project led by Darebin Council, the Accelerating Sustainable Building in Local Government (ESD) project led by Manningham Council that recently received Accord funding and the Sustainable Public Lighting 'Walk the Talk' project funded by an AGO Accelerating Action grant, led by Darebin Council.

### ***Introduction***

Communication is an essential tool for the Northern Alliance for Greenhouse Action. Many of the priorities listed in NAGA's Strategic Plan 2006 require effective communication, both internally and with a range of external agencies, partners and the community.

The NAGA Strategic Plan 2006 identifies the four key NAGA strategic directions:

- Increase NAGA's influence and support through strong relationships and linkages;
- Increase community knowledge and action on climate change
- Increase sustainable energy options and uptake within the NAGA region
- Sustain NAGA

These four strategic directions reflect NAGA's concern to achieve urgent and substantial climate action, as well as NAGA's focus on strengthening and sustaining the NAGA alliance and its role in the northern region of metropolitan Melbourne.

NAGA annually develops an Action Plan to translate the priorities identified in the Strategic Plan into actions. This Communications Strategy provides a summary of the type and frequency of communications required to fulfil the priorities listed in NAGA's Action Plan. NAGA's Action Plan is reviewed and revised annually, and this Communications Strategy will subsequently be reviewed and revised as necessary.

### ***NAGA Members and Stakeholders***

NAGA communicates both internally and with a range of different organisations, groups and sectors.

- **NAGA committee members** are drawn from staff (usually Environment and Sustainability Team officers) of its 10 member organisations.
- **NAGA's member organisations** are the Cities of Banyule, Darebin, Hume, Manningham, Melbourne, Moreland, Whittlesea, Yarra, Shire of Nillumbik, Moreland Energy Foundation.
- NAGA develops **partnerships** with other organisations, government agencies and industry sectors in order to effectively implement emission reduction projects. These partnerships include both funding bodies and organisations with which NAGA works to implement the projects (see below).
- **General community**

### ***NAGA project partnerships and other stakeholders***

<b>NAGA Project Partners and Stakeholders</b>	<b>NAGA involvement</b>
other Regional Greenhouse Alliances: CVGA, WPGA, NEGHA, SWSP, WAGA	Informal information sharing and resourcing; quarterly meetings
Department of Sustainability and Environment	Funding to NAGA under the Regional Partnerships program; Regional Greenhouse Officer's attendance at NAGA meetings; coordination/liaison with Regional Coordinators' quarterly meetings; Accord Funding; provision of information and resources, incl. impacts and adaptation, etc; Sustainability St – member of Working Group
Sustainability Victoria	Coordination/liaison with Regional Coordinators' quarterly meetings; local government programs; Streetlighting project – VSPLAG member, technical input; Accord funding – contract administration
ICLEI	Coordination/liaison with Regional Coordinators' quarterly meetings; Streetlighting project – VSPLAG member, technical input
Municipal Association of Victoria	Coordination/liaison with Regional Coordinators' quarterly meetings; Streetlighting project – VSPLAG member; local government liaison
Dept of Planning and Community Development	Sustainability St – provision of funding, member of Working Group
Electricity Distribution Businesses	Streetlighting Project – technical input, liaison re establishing costs in VSPLAG process
The Environment Shop	Sustainability St - presentation to training course, provision of innovative energy efficiency materials
Essential Services Commission	Streetlighting Project – regulatory context/input
National Electrical and Communications Association	EcoSmart Electricians project – NAGA is a member of NECA's Steering Committee for the project
North East Neighbourhood Houses Network; Jika Jika Neighbourhood House	Ecoliving Demonstration Centre project - NAGA is a project supporter
RMIT – Centre for Design	Carbon Neutral Communities – NAGA is an industry partner; NAGA's Towards Zero Net Emissions project – RMIT is a project partner
Victoria University	Sustainability Street project – evaluation
Village Green	VIC 1000 project – implementation
Vox Bandicoot	Sustainability Street project – implementation
Yarra Valley Water	Sustainability Street project – provision of in-kind support; water efficient materials to project participants Vic 1000 project – level 2 supporter
federal Department for Climate Change (AGO)	Provision of information and resources; Streetlighting Project – technical input, regulatory context/input
Victorian Office for Climate Change	
Adjunct Professor Alan Pears	Provision of information and support
Clean Energy Council	Occasional organisation of seminars; local government forum

## **NAGA Communications Aims and Outcomes**

<b>Stakeholder Category</b>	<b>Aim</b>	<b>Method</b>	<b>Outcome</b>
<b>NAGA committee members</b>	To ensure that each committee member is informed of all the operational components of NAGA, and is involved in the decision making processes.	Provide timely, informative and concise reports and information to NAGA members, through preparation and distribution of regular email bulletins, quarterly reports and minutes of NAGA committee meetings and NAGA Working group meetings. Assemble and distribute an Induction Kit for new NAGA Committee members.	NAGA committee members are engaged in and well informed of NAGA operations. NAGA committee members have access to up-to-date information on broader issues and opportunities for climate change action.
<b>NAGA member organisations</b>	To ensure that NAGA member organisations are informed of NAGA's directions, progress and outcomes To build Councils' capacity and linkages between council departments	Organise an annual high level forum for NAGA members' CEOs, mayors and councillors. Organise specific information forums and workshops on specific topics for NAGA's members and partners.	NAGA member organisations continue to contribute to and support NAGA. NAGA member organisations capacity to address climate change is built and supported.
<b>NAGA project partners and other stakeholders</b> including funding bodies; and local, state and federal government agencies	To ensure that project partners and other stakeholders are informed of NAGA's directions, progress and outcomes, as well as promoting consultation/information sharing and seeking advice and assistance when required	Project partners will be contacted and engaged with the project and NAGA will publicly promote their participation.	NAGA project partners and other stakeholders continue to contribute to and support NAGA. NAGA project partners and other stakeholders involvement promoted.
<b>General community</b>	To provide information or referral to other sources on request.	Information provided through NAGA website (including links to other websites). Project implementation. When requested, NAGA will provide information on its projects and initiatives for inclusion in NAGA members' publications	General climate change information and communication will continue to be provided individually by NAGA members

## **NAGA Communications Actions**

	<b>NAGA members</b>	<b>NAGA member organisations</b>	<b>NAGA stakeholders (project partners, etc)</b>	<b>general community</b>
<b>NAGA Strategic directions</b>				
<b>1. NAGA's influence &amp; support</b>				
	regular email bulletins			
	quarterly reports	quarterly reports		
		Annual high level forum		
	NAGA website	NAGA website	NAGA website	
<b>2. community knowledge &amp; action</b>				
			NAGA website	NAGA website
		submissions/ advocacy	submissions/ advocacy	
<b>3. project implementation</b>				
	regular email bulletins			
	quarterly project reports		quarterly project reports	
	information workshops	information workshops	information workshops	
	NAGA website	NAGA website	NAGA website	NAGA website
<b>4. Sustain NAGA</b>				
	induction kit			
	NAGA committee meetings			
	NAGA Working Group meetings		NAGA Working Group meetings	
	information workshops	information workshops	information workshops	
	NAGA website	NAGA website	NAGA website	