

STEP UP Conference 12th May 2014: The Lighthouse, Glasgow

Developing the new Energy and Carbon Masterplan

The Glasgow STEP UP team of Glasgow City Council, University of Strathclyde and Scottish Power Energy Networks held a successful stakeholder engagement event for the City's new Energy and Carbon Masterplan at [the Lighthouse](#) in Glasgow on Monday the 12th of May (for agenda see Annex 1).

Over seventy representatives from the private, public, voluntary and community sectors in Glasgow attended the half day event to learn more about the developing Energy and Carbon Master Plan. Attendees took part in workshops covering energy efficiency; local energy generation and district heating; transport and waste – each aimed at helping to identify actions for the new Plan.

Plenary sessions



Councillor Frank McAveety – Glasgow City Council

Councillor Frank McAveety, Convenor of Glasgow City Council's Sustainability and Environment Policy Development Committee, outlined Glasgow's vision and commitment to becoming one of Europe's most sustainable cities. Councillor McAveety went on to talk about how the city is focusing on regeneration and transformation to a low carbon economy, which will deliver social and economic benefits to Glasgow's citizens.

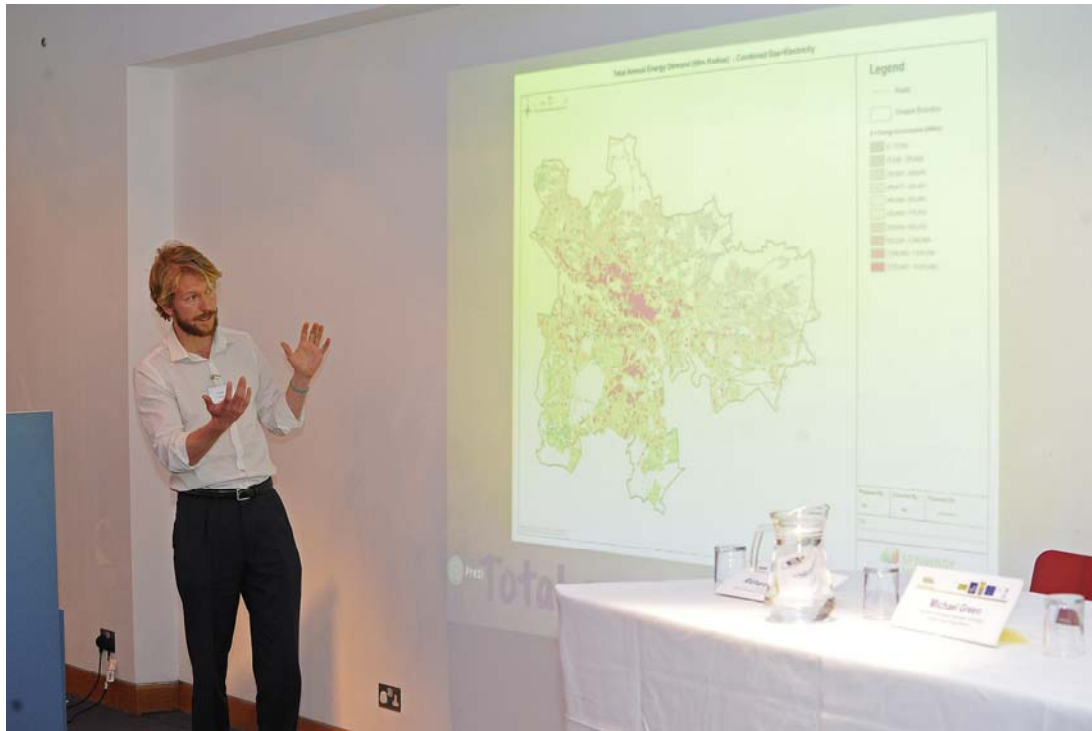
STEP UP Project Coordinator Richard Bellingham of University of Strathclyde, outlined the history of the STEP UP project and explained that STEP UP seeks to enhance existing sustainable energy action plans (SEAPs) in the four STEP UP cities of Ghent, Glasgow, Gothenburg and Riga while developing a process for enhancing SEAPs in cities across Europe. He highlighted the value in creating SEAPs in cities aiming to deliver faster progress towards European energy targets whilst also creating jobs, eliminating fuel poverty and ensuring energy security.



Richard Bellingham – University of Strathclyde

Alastair Brown, Head of Environment and Sustainability in Glasgow City Council discussed Glasgow's transition to becoming a 'Sustainable, Resilient, Smart city'. He outlined the characteristics of a future smart and sustainable city and highlighted the importance of the Sustainable Glasgow initiative, a public and private partnership working to deliver a green economy, reducing emissions and delivering social objectives. He also reported on Glasgow's participation in the [Rockefeller Foundation's 100 Resilient Cities Centennial Challenge](#) in 2013, where Glasgow was chosen as one of the first 33 global cities selected for inclusion. Finally Alastair described the [TSB Future City Glasgow Programme](#) and how the programme will demonstrate ideas to make life in the city smarter, safer and more sustainable through technology.

Michael Green of Scottish Power Energy Networks (SPEN), showed how SPEN has used GIS technology for the STEP UP project to create a comprehensive map of energy flows in Glasgow taking into account future developments in the city. The model used by SPEN allows for projected energy demand estimates to be included and future energy infrastructure requirements to be anticipated. Michael explained that an integrated approach to energy planning is being developed in Glasgow to co-ordinate development and investment in energy infrastructure by SPEN and this will form part of Glasgow's SEAP.



Michael Green – Scottish Power Energy Networks

Gavin Slater, City Energy and Carbon Manager from Glasgow City Council introduced Glasgow's Energy and Carbon Master Plan, outlining the actions in Glasgow's existing Sustainable Energy Action Plan (SEAP). He highlighted the trends in Glasgow's CO₂ emissions and additional actions required for Glasgow to reach its target of a 30% reduction in CO₂ emissions by 2020 from a 2006 baseline. Gavin explained that the conference workshops would help develop new actions for the plan, and identify key stakeholders and how to involve citizens.

Workshops

Four parallel workshops were held on the topics of Energy Efficiency, Local Energy Production and District Heating, Transport and Waste and Recycling. All workshops were well attended and lively discussions took place. A wide range of actions and suggestions came out of all the workshop sessions that will contribute to the development of Glasgow's new Energy and Carbon Master Plan scheduled to be produced later in 2014. The results of the four workshops are described in detail on page 5.



Participants in Transport Workshop

Graham Pinfield, STEP UP Project Manager for Glasgow thanked all attendees for their participation and advised that results of the workshops would be assimilated and circulated to all participants, and further consultations would be held leading up to the draft plan stage together with another event at the launch of Glasgow's Energy and Carbon Master Plan.

Local Energy Generation and District Heating Workshop

Attendees

Facilitators:

Gavin Slater – Glasgow City Council

Michael Green – SPEN

Rosemary O'Donnell – Clara

Neil Phillips – Independent

Alan Gallagher – NHS

Christopher Finnie – Viridor

Sandy Wito – SSE

Fergus Tirkell –

Viv Cockburn – SFT

Angela Tyrrell – Shettleston Energy Efficiency

Nathan Goode - Grant Thornton

Ellen Stevenson – Scottish Enterprise

Stephanie Clark - Scottish Renewables

Steve McGowan – GCC

Lucy Gillies – South Seeds

Ciaran Higgins – Craighall Energy

Jennifer Anderson – SSN/Keep Scotland Beautiful

Alan Hendry – Jacobs

David Hay - GCC

Questions for discussion:

- What actions should be in the SEAP?
- Who are the key stakeholders to engage?
- Can citizens be involved and how?

Notes from the discussion:

The groups discussed four topics in turn – looking at what existing SEAP actions were and what potential actions could be included. Key points emerging were:

Local Energy Generation

The possibility of a local **target for decentralised energy/district heating** which should be realistic and achievable but also ambitious.

Emphasis should be on local renewable generation. A clear **roadmap** for decarbonisation and decentralised energy would be beneficial.

Concerns were expressed of installing gas CHP only and not looking at enough at **renewables**.

Potential for funds to be provided to allow **pilot schemes** and also a vehicle for community groups to engage with Council.

Registered Social Landlords (RSLs) with south facing roofs were a possibility for **photovoltaics** (PV) and could consider PV on tenements.

Participants wanted to see **Planning as an enabler** not a barrier as it is currently seen – but there is a current opportunity for people to review LDP and feedback.

Smart Grids

Smart grids are likely to occur with or without GCC intervention, so a clear city **strategy and roadmap** would allow better planning and integration to enable maximisation of cross sector opportunities.

It was suggested that Glasgow learn from other cities and areas such as Shetland (the Northern Isles New Energy Solutions project), Flensburg and others.

The group felt that smart grid strategy should be pro-active rather than just waiting for natural evolution.

District Heating Networks

It was suggested that **standardisation of systems** and mandatory requirements from developers would allow integration and linking between small DH schemes or private wire systems at a later date.

Stakeholders felt that there needs to be a road map for a **city-wide district heating network**.

The group also suggested that the Council needs engagement with **housing associations** and local development trusts which may provide smaller local opportunities.

It was also discussed that consideration should be given to the **food** market with respect to heat/energy and **biomass DH** should also be considered.

Energy Services Company (ESCO)

As ESCOs cover a wide range of areas, the group felt greater clarity was needed on what it is aiming to deliver, what are its objectives. Suggestions included:

- Accessibility for community energy groups
- A Glasgow Social Electricity tariff
- Local renewable generation – for the good of the community not just selling energy to make profit
- Sustainable, affordable warmth for Glasgow citizens

Smaller ESCO's possibly feeding into larger city ESCO (Danish model)

Stakeholder involvement

The consensus was that more active engagement is required as people are generally unaware of developments, contact information and how best to get involved should be more effectively communicated. The group suggested a clear vehicle for this – e.g. a one stop shop with clear contacts

Stakeholders felt the Council needs to formalise interaction with community energy partnerships.



Gavin Slater, City Energy and Carbon Manager, Glasgow City Council

Stakeholders that need to be involved include:

- RSL's
- South Seeds
- Chamber of Commerce
- Fuel Supply Chain (operations in Glasgow)
- Our DNO's and other energy people 'Green Energy'
- Scottish Government
- Scottish Water
- Viridor
- Home Energy Scotland (Lilian Delaney)
- Local Energy Scotland
- Citizens
- Libraries
- CAB

Energy Efficiency Workshop

Attendees

Paula Collins – GHA
Alan Crawford – The Wise Group
Gordon Dick - Resource Efficient Scotland
Lillian Delaney – Energy Efficient Scotland
Clare McHugh
Evelyn Milligan
Deborah Gardiner – GCC
Derek Lyons - GCC
Colin Porteous

Questions for discussion:

- What actions should be in the SEAP?
- Who are the key stakeholders to engage?
- Can citizens be involved and how?

Notes from the discussion:

Ideas for actions:

- Improvements in **ventilation control** in housing are often neglected – priority is given to insulation, but this can lead to unintended consequences if there is poor ventilation (eg overheating)
- Infrastructure and removing the need for energy use is often a priority, but the psychology of **energy use behaviour** is not considered enough – need for education on this, consideration of personal choices, encouraging people to change their behaviours
- National **smart meter** roll out programme is in place, but SEAP could encourage utilities to work with housing associations to roll out smart meters on a large scale across Glasgow
- We're not good at **recovering heat** – this is often overlooked
- **Grey water** usage could be considered as an option
- SEAP could help **encourage community groups to identify and apply for funds** to improve energy efficiency in their own buildings – help citizens to get involved and make things happen (eg funding available through Climate Challenge Fund)
- **Retrofit programmes** are seen to be key aspect of energy efficiency in the city, but little potential for Green Deal – difficult for GCC to do anything to improve it as it's a national scheme; timings also not convenient (ie time it takes to get a GD assessment); and most householders don't have the spare cash
- **Learn lessons from Europe where cities seem to be more experimental**, for example, heat pumps (ground source and air source), focus on insulating roofs and floors (innovative technical solutions?)
- **Replacing some buildings** that would just be too expensive to make more efficient? But this would need a comprehensive cost benefit analysis of both options, and may not be viable given planning rules



Stephen McGowan, Housing Strategy, Glasgow City Council – Energy Efficiency workshop

- **Comprehensive analysis of effectiveness of efficiency measures vs changes in use** – behaviour is seen to be a big part, but what's the impact on energy bills if you turn your thermostat down. NB. G-Heat looking into the impact of energy efficiency advice.
 - GHA has plenty of efficient properties with residents still in fuel poverty due to energy price rises – but as a city it's not possible to impact prices much
- **Bulk purchasing of energy** in the city could be one solution to provide cheaper energy
- **Energy efficiency standards for buildings should be higher**, they are not ambitious enough currently.
 - But need to tell people how to use their heating systems, as there is no point just having efficient systems in place if they are not used well (eg some boilers are installed and left on the least economical setting)
 - Standing meter charges are also leaving people in debt
- **Under floor insulation in tenement housing** should be done as standard (rental properties)
- **Set up a forum** for people to learn lessons from each other and take joined up actions (eg best ways to give energy efficiency advice, etc)
- **Voluntary kitemark/standards for installers of renewable technologies** – eg solar PV can actually lead to increased electricity consumption; people need to understand how these technologies work, which requires good dialogue between installers and households/businesses
- **Joining up various projects across the city** could make them more effective

- **Council procurement** – GCC needs to look at new evolutions in technology and procure more efficient equipment
- **Employee engagement in the workplace** – employers have a big role to play in employee behaviour, as staff will have different views and understanding of the issues
- Key challenges to address re **lighting and over-cooling (air conditioning) in non-residential buildings**
- **Regulation of industry sector** has a big role to play

Stakeholder involvement

The following key stakeholders were identified as being important for energy efficiency actions:

- Energy Utilities
- Residents
- GCC
- Housing associations
- Advice services/centres
- Installers
- Commercial sector
- Employers
- Industry

Engaging citizens:

The following actions to involve and engage citizens were suggested:

- Tenants meetings and forums can be a good way to get messages across to residents – face to face interaction often works best. Useful if you can then find a way to quantify the impact of this type of engagement too.
- Engaging owner occupiers is challenging – easier to work with social housing as smaller number of stakeholders (ie housing associations in the first instance)
- Working with energy advice services such as G-Heat to help residents understand energy use and its impact on bills, and how to use heating systems and controls efficiently – difficult to know how to tell people how to use energy properly

Transport Workshop

Attendees

Ewan Wilson – Coordinator (Glasgow City Council)
Neil Sturrock – Facilitator (SPT)
Geoff Martin - Community Cycle
Keith Stark – City Car Club
Gregor Yates – Glasgow City Council
Mark Irwin – Glasgow City Council
Theodore Holton – Green Hydrogen Consultancy
Victoria Leiper - The Bike Station
Callum McCallum – Glasgow City Council
Mark Hughes – Cycling Scotland
Duncan Booker – Glasgow City Council
Steve Bunch – Edinburgh City Council
Michael Kellet – Edinburgh City Council
Vincent McInally – Glasgow City Council
Steve Gray – Glasgow City Council
Stewart Cahill – First Scotrail
Fred Danquah – Carcap

Questions for discussion:

- What actions should be in the SEAP?
- Who are the key stakeholders to engage?
- Can citizens be involved and how?

The workshop began with EW presenting the process of revising transport actions in the new Energy and Carbon Master Plan. The presentation outlined actions from the previous SEAP (Sustainable Glasgow Report 2010), results of the STEP UP gap and issue analysis, results of problem tree analysis and proposed solutions. The results of the two STEP UP surveys highlighted the importance of transport to citizens and organisations.



The group started discussion on gaps in the Glasgow City Council actions outlined in the existing SEAP. It was noted that there was no one present from First Bus, Glasgow's largest commercial bus operator and no representation from the other bus operators. Some members of the group suggested bus operators need to be involved in the development of the Energy and Carbon Master Plan if real changes to emissions and air quality are to be realised in the city, and that these operators should also be well represented on the Sustainable Glasgow Board.

It was also noted that commercial operators have no incentive to invest in low carbon vehicles as it is costly, they receive no benefit from it and there is no penalty for not doing so. It was also suggested that the current vehicle standards regulations are too lenient and the minimum standard is too low, thus operators can be compliant with legislation but still emit harmful emissions. It was acknowledged that commercial operators have less interest in taking on the initial upfront investment required, and that improving infrastructure and achieving strong public commitment may help to drive demand for low carbon public transport vehicles.

The lack of acknowledgement of City Car clubs in the plan's actions was suggested to be a missed opportunity. City car clubs were discussed and the group agreed that they should be supported by the council and encouraged to increase their presence in the city. A lack of education and awareness-raising with respect to the opportunities car clubs offer was seen as a barrier to increasing membership. An example was given of its success in Edinburgh and the positive effect it has had on behavioural change with respect to personal car use.

Another significant issue was the lack of communication and general coordination between providers of different modes of transport. Some app based technology is useful to passengers who want to plan their journeys however it is often restricted to one mode. Increased cooperation between different providers is required to improve the user's experience, though it was also recognised that the current situation of competing operators can be confusing to the public also faces legislative barriers. It was also suggested that

general information provision for travellers needs to be improved to increase informed decision making by the public, discouraging private car use.

The role of strong leadership on transport was also discussed within the group, as was agreed to be essential alongside technical solutions to transport challenges. The importance of learning from other cities with strong leadership, such as Bristol, was recognised as key.

It was recognised that safety concerns and poor infrastructure are two considerable barriers to increasing cycling uptake, and that strong leadership is required, with full commitment to undertaking infrastructural improvements, before considerable behavioural change will be seen. Grassroots and community leadership was also agreed to have a significant role alongside top-down leadership, to engage with people on a more personal level.

Actions

Group discussion generated many suggested actions for inclusion in the transport section of the Energy and Carbon master Plan. Some of the suggested solutions were:

- Re-evaluate the delivery of **bus transport services by the public sector or re-regulate market**. Commercial operators must be involved in the planning process and advised that harmful vehicle emissions will not be tolerated. This would represent the biggest shift in public transport delivery for some time and would be a lengthy and challenging process.
- Develop and support **statutory quality bus partnerships** – these partnerships help cross boundary issues and ensure a coordinated response to issues arising across neighbouring council areas.
- Deliver user friendly **integrated ticketing** for use across all modes in Glasgow. SPT's zoned card exists but it does not make use of Smart card technology and its subway ticketing system has been upgraded and does use smart card technology but can only be used on SPT's subway. To really stimulate public transport use in the city and reduce private car usage, the focus has to be on the user's experience. This requires a coordinated response by all transport providers with excellent information on connectivity of modes available in many formats to all.
- **Active Travel** – this topic generated good discussion and several actions. It was suggested that reducing CO₂ emissions is not the most effective way of selling active travel. The health and quality of life benefits of active travel should be the main focus of selling the idea, this could benefit from the momentum gained from the Commonwealth Games. It was stated that selling active travel has to start early and it was noted that this is already integrated into the school syllabus. However active travel for children requires infrastructure to support the activity. It was suggested that the biggest barrier to active travel in Glasgow especially with respect to children is perception of poor safety. Actions on this would include:
 - Segregated cycle and walking lanes to remove the perceived safety risk.
 - 20 mph zones to be normalised to increase safety.
 - Connected cycling routes. Routes in city centre must be connected with suburban routes.
 - Car free days/road closures for cycle/walking events in city. Look to Bristol's experience in developing car free Sundays.
 - Encourage/support employers to provide active travel plans and facilities. New office developments to include facilities for active travel.

- Support both cyclist friendly and fuel-efficiency driving to be taught in public transport/HGV driver training schemes, to increase both road safety and achieve environmental benefits.
 - Follow up on employers' travel plans after implementation.
 - Segregated cycle lanes to replace one side of car parking spaces – makes positive statement.
 - Use apps to provide better route information for active travellers.
 - Focus on the user experience to produce a more inclusive education and engagement approach to achieving sustained behavioural change
 - Establish targets e.g 30Km of new cycle lanes pa? or 5% rise in active travel commuters pa? Targets will drive positive actions in infrastructure provision and number of participants. – (Related to Leadership point.)
- The group agreed that **Leadership** has to be focus of delivering travel culture change. Strong leadership backing for actions is necessary to realise plans of events and programmes such as car free Sundays/higher investment in infrastructure that will influence and drive behavioural and culture changes.
 - **Events to be piloted** then feedback requested rather than consultation on a future event provoking negative response from businesses so no experience of the effects of the events gained.
 - A **distribution hub** is an option to reduce emissions from delivery vehicles and freight transporters in the city centre. Emission free vehicles could then deliver goods to retail units reducing CO₂ emissions, improving air quality, reducing noise pollution, make the city centre environment safer and make the street a more pleasant environment for pedestrians. A consultation or working group with Chamber of Commerce and retail organisations – it was noted that this suggestion has been made previously and retail organisations acknowledged that the current situation is imperfect and alternative solutions should be explored. (Possibly less opposition than anticipated to this suggestion)
 - Improved **information dissemination** on travel issues. Travel information remains uncoordinated. Support should be given to commercial operators to integrate information with all modes, creating a central hub that brings together information on travel options in an accessible and impartial way.
 - Explore **renewable hydrogen technology** as an emission free fuel option for public transport. Consult Aberdeen's experience of 2 x hydrogen buses.
 - Continue programme of upgrading numbers of **zero emissions vehicles** in municipal fleet.
 - Continue to learn from experiences in other cities, on both the barriers to achieving a low carbon transport system and how they were overcome.

The group agreed on a range of actions outlined above and that Glasgow City Council has a role to play in coordinating the partnerships necessary to deliver widespread change. It was agreed that strong and supportive leadership is fundamental to delivering change in travel culture through improved infrastructure investment, promotional events and information dissemination. Active travel is aiming to reducing vehicle use and emissions but also has other positive effects such as improved health and more liveable streets however for this to develop and grow; investment in infrastructure is required to improve safety. More generally it was acknowledged that significant change is required to deliver the desired reductions in emissions from transport in Glasgow to help the city's plan reach its overall target of a 30% reduction in CO₂ emissions. It was felt that transport specific targets would be beneficial and would help encourage and measure changes in transport culture.

Waste and Recycling Workshop

Attendees:

Tony Boyle – City Cleansing and Waste Manager, Glasgow City Council (Facilitator)
Steven Don – Regional Manager – Viridor (Facilitator)
Karina Mirza – STEP UP Project, Glasgow City Council (Moderator)
Fiona Chan – Home Energy Scotland
Laura Jardine Coom – Environment and Sustainability, Glasgow City Council
Elspeth Watson – Daldowie Training Centre, Glasgow City Council
Stewart Miller – University of Glasgow
Martin Grey – Viridor
Heather Claridge – Glasgow Green Year 2015, Glasgow City Council
Laura McGibbon – Coordinator Green Wardens, Glasgow City Council
Ryan Noble – Clean Glasgow, Glasgow City Council

Questions for discussion:

- What actions should be in the SEAP?
- Who are the key stakeholders to engage?
- Can citizens be involved and how?

Notes from the discussion:

Tony Boyle presented an update on the cleansing operations that Glasgow City Council is delivering. The main points mentioned were:

- Delivering a waste collection service for citizens 7 days a week, changing workforce 4on-4off patterns
- Smart thinking reducing amount of vehicles for waste collection operations.
- The constraints of waste collection for tenement flats
- Only 27% of 280,000 tonnes of waste produced in 2013/14 is recycled.
- The new Material Reclamation Facilities (MRF) in Robroyston is providing segregation services to divert waste from landfill.
- Food waste production by the city and the impact it has.
- Innovative partnership with Viridor to deliver a £154m state-of-the-art recycling and sustainable waste management facility at Polmadie.

Steven Don from Viridor provided an update on the Glasgow Recycling and Renewable Energy Centre (GRREC). The GRREC facilities will manage the waste that is collected in “green bins” or the general waste in a 3 step process:

1. Smart-Materials Recycling Facility
2. Anaerobic Digestion
3. Advanced Conversion Facility

Discussion took place about opportunities for renewable energy from Polmadie heat generation.

Karina Mirza from STEP UP mentioned the actions related to waste included in the existing SEAP analysing the status of these action since 2010. The results of the citizens survey carried out on March/April 2014 by STEP UP were presented, focusing on the top three

aspects people rated the most important in Glasgow's green/sustainable agenda, these were:

1. Energy efficiency
2. Recycling and waste management
3. Local transport

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Karina Mirza – Glasgow City Council

The results highlighted the need for a stronger set of actions in the Waste sector for the enhanced SEAP (Energy and Carbon Masterplan), e.g. include green house gases accounting not just carbon accounting; food waste accounting; behavioural change actions; and also having recycling measures.

The group split into two sub-groups to discuss the information presented and suggest actions related to recycling and waste. The outcomes of the group discussion are summarised in the following points:

What are the priority actions on waste and recycling?

- Glasgow City Council to lead by example in recycling and waste, promoting actively the message not only for domestic waste but also for commercial waste.
- Utilise the idea of Circular Economy (re-use and re manufacturing)
- Communicate the message clearly: more effective strategies to engage with citizens and organisations to communicate about recycling actions.
- Maximise the opportunities to recycle and have accessible services.
- Maximise the participation of citizens by encouraging focus groups in communities, schools and universities etc.
- Acknowledge the impact of food waste on greenhouse gas emissions, climate change and quality of life.

Which stakeholders should be involved?

Glasgow City Council and Arms Length Organisation's (ALEOs) staff.
Active support from elected members.

Have green champions in city wide organisations to actively promote recycling and campaigns for reducing waste and behavioural change at the root of organisations. Producers of commercial waste (restaurants, hotels, private and public organisations). Citizens.

How can citizens be engaged?

Engage with schools and high-schools promoting Education packs about Recycling as part of Curriculum for Excellence, making pupils and teachers active citizens in practicing recycling. Education process should not stop in high school; it should be a continuous learning process that carries on in universities and higher education institutions. Promote environmental awareness and recycling in these institutions.

Make waste “socially unacceptable” as with “smoking” or “drink-driving”.

Open data about waste and recycling making it transferable and available in an accessible language to increase citizens’ awareness. There was a suggestion about developing an app to assist with this.

Empowering collectors.

ANNEX 1

AGENDA STEP UP CONFERENCE -

- 12:30 - 13:00 Registration and lunch
- 13:00 - 13:05 Introduction - Graham Pinfield
- 13:05 - 13:15 Welcome and vision for Glasgow – Councillor Frank McAveety
- 13:15 – 13:25 STEP UP and city energy planning - Richard Bellingham,
University of Strathclyde
- 13:25 - 13:40 The Sustainable, Resilient and Smart City – Alastair Brown,
Head of Environment and Sustainability.
- 13:40 - 13:55 Energy flows, issues and opportunities – Michael Green,
Scottish Power Energy Network.
- 13:55 – 14:10 Energy and Carbon Master Plan for Glasgow – Gavin Slater,
Glasgow City Council.
- 14:10 – 14:25 Questions and Discussion
- 14:25 - 14:40 Coffee Break and Visit the Exhibition
- 14:40 - 15:40 Workshops
- Energy efficiency
 - Local energy generation and District Heating
 - Transport
 - Waste
- 15.40 – 15.50 Tea/Coffee
- 15.50 – 16.20 Workshop feedback
- 16.20 – 16.30 Conclusions