



EUCO2 80/50 Project

Synthesis Meeting Report

The University of Manchester

12-14 April 2011

METREX and the EUCO2 80/50 project

METREX and the EUCO2 80/50 project

METREX is the Network of European Metropolitan Regions and Areas. It has members from around 50 of the major urban areas of Europe. It is a self-help network of practitioners in spatial planning and development at the metropolitan level. Practitioners include politicians, officials and their advisers. The purpose of METREX is the exchange of knowledge and experience on metropolitan affairs.

METREX first took an interest in the issue of climate change at its 2005 Meeting in Granada. It received a presentation from the Tyndall Centre on the risk of dangerous climate change and the implications for metropolitan areas. It was clear that METREX needed to respond.

The Tyndall Centre introduced METREX to Dr. Sebastian Carney, who was then developing the Greenhouse gas Regional Inventory Protocol or GRIP. GRIP is a computer-based tool for the assessment of urban greenhouse gas emissions and the exploration of mitigation scenarios. Dr. Carney was interested in the practical application of GRIP and METREX was a Network looking for a means through which to develop an effective response to climate change on an informed basis. It was an ideal partnership for the practical application of research.

METREX was able to arrange for an extension to InterMETREX, which was a major Interreg IIC project led by Glasgow and the Clyde Valley to develop a METREX Benchmark of effective spatial planning and development practice at the metropolitan level (see www.eurometrex.org). Through this extension METREX was able to pilot the application of GRIP and to demonstrate and confirm its practical value.

METREX then promoted the wider use of GRIP within the Network. A partnership of fourteen metropolitan areas decided to proceed with the EUCO2 80/50 project, which was designed to enable metropolitan areas to produce greenhouse gas inventories and to explore mitigation scenarios to achieve the 80% reduction, over 1990 levels, then sought by the European Union as a target.

EUCO2 80/50 has been led by the Metropolregion Hamburg, which also promoted a Climate Change Conference in 2009 in association with METREX. The Conference was important in establishing a body of European metropolitan opinion that was receptive to the approach that GRIP had to offer. However, EUCO2 80/50 could not have proceeded without the enlightened support of General Electric through its "ecomagination" programme.

The EUCO2 80/50 project involved fourteen partners running GRIP through a series of three-day "stakeholder" workshops in each of their metropolitan areas. METREX also participated as a full partner to represent those Members of the Network that were not able to participate. METREX undertook to produce an addition to the METREX Benchmark, mentioned above, as an outcome of the project.

The EUCO2 80/50 project has fulfilled all its objectives. It has raised awareness of climate change issues, created a level of understanding of the real issues to be addressed in devising effective mitigation strategies and created a body of informed opinion through which to make progress. METREX will sustain the EUCO2 80/50 Club to keep the project stakeholders in touch with one another as the outcomes of the project are taken forward.

EUCO2 80/50 is one of the largest and most significant initiatives of its kind. The fact that it has been completed successfully over twelve months, during 2010, is due to the commitment of the partners and, in particular, the Lead Partner. Dr. Carney created a team of climate specialists within Manchester University and this team managed the fourteen partner workshops. The logistics were daunting and the workload formidable.

The University was also full partner in the project. Dr. Carney himself has been the intellectual driving force behind the project, through the use of GRIP, and its success is testament to his dedication. He and his team have mentored and guided a very varied group of participants to successful collective outcomes in each partner area.

EUCO2 80/50 demonstrates how serious issues can be addressed effectively at the European level by committed partners from metropolitan areas, their stakeholder interests, the research community and the private sector.

METREX thanks all the numerous colleagues who participated in the EUCO2 80/50 project. The Network itself has benefitted greatly from its participation and will now play its part in taking forward the lessons learned through the metropolitan spatial planning and development process.

Roger Read,
Secretary General,
METREX.

EUCO2 80/50 Project - Synthesis Meeting

Location - The University of Manchester, University Place, Room 6.207
12-14 April 2011 (see Appendix 1 for the full Agenda)

Purpose of the Synthesis Meeting

The EUCO2 80/50 Project Synthesis Meeting was held to consider the following.

- Presentation of results from the EUCO2 project
- Partner positions on the project and their next steps
- Partnership collective position on the project and the outcome
- Partnership collective position on the project and the next steps
- Consideration and adoption of outcomes from the Tuesday sessions

- Conclusions and Recommendations

The Conclusions and Recommendations were considered by the Partners on Wednesday 13 April 2011 and commended to the wider METREX membership

EUCO2 80/50 Project - Conclusions and Recommendations

The fourteen European metropolitan area partners in the EUCO2 80/50 project, having explored greenhouse gas mitigation scenarios with stakeholders during 2010, have come to the following Conclusions and Recommendations.

Context

Having regard to the objective of,

- Europe 2020 to decouple the European economy from carbon fuels
- The European Council to achieve levels of greenhouse gas mitigation of 80-95% by 2050 (effective decarbonisation)
- The EU Building Standards Directive (2010) to reduce energy usage to 120kw/h/m² or below in existing and new buildings (Passivhaus standard or better)

Conclusions

The partners in the EUCO2 80/50 project conclude that European metropolitan areas could and should,

- Substantially reduce the energy consumption of their new and existing building stock, through the retro fitting of insulation and the capture of waste energy
- Meet such reduced levels of consumption from metropolitan renewable energy generation, including their urban areas and wider areas of influence
- Make provision for electromobility and a hydrogen fuelled transport future

In consequence, substantial metropolitan self-sufficiency in energy is conceivable and achievable well before 2050

Metropolitan energy sustainability

Energy self-sufficiency offers,

- Urban energy security of supply
- Urban energy price stability
- Very substantial cost savings
- Investment in urban retro fitting and urban renewable energy generation funded through energy saving
- Substantial employment creation
- Improved metropolitan competitiveness
- Effective metropolitan decarbonisation, other than for those industrial activities (excluding energy generation) that require carbon capture and storage

Such considerations are particularly important during a period of financial constraint and economic uncertainty

Decarbonisation before 2050

The concept of Europe's major metropolitan areas being able to meet their own reduced energy consumption from their own renewable energy resources and to thus decarbonise is a new and highly significant outcome of the EUCO2 80/50 project.

Europe's metropolitan areas could lead the way to greenhouse gas emission reduction by 95% well before 2050

Recommendations

In view of these conclusions the EU CO₂ 80/50 partners,

- 1 Commend the use of the Greenhouse gas Regional Inventory Protocol (GRIP) by European metropolitan areas as a means of,
 - Engaging stakeholders with the issue of climate change
 - Raising the level of knowledge of stakeholders of climate change mitigation issues
 - Raising the awareness of stakeholders of metropolitan greenhouse gas mitigation problems and opportunities
 - Exploring mitigation scenarios
- 2 Support the role of metropolitan spatial planners in including Planning for Energy as a strategic planning function, as conceived in the METREX Benchmark, which needs to be considered within integrated metropolitan Visions and Strategies
- 3 Support the concept of a Planning for Energy tool, being devised and produced by METREX for on-line use by metropolitan spatial planners, to enable metropolitan assessments to be made of,
 - Socio-economic futures and their energy needs
 - Climate change futures
 - Waste energy saving potential from the building stock
 - Urban renewable energy generation potential from the building stock
 - Urban retro fitting, waste energy capture and renewable energy generation investment programmes
 - Energy self-sufficiency and security
 - Levels of decarbonisation
- 4 Urge the recognition by all levels of European governance of the key findings of the EU CO₂ 80/50 project that,
 - A reduction in greenhouse gas emissions by 80% by 2050 in most European metropolitan areas is achievable
 - It is conceivable and feasible that many European metropolitan areas can become largely self-sufficient in renewable energy well before 2050 thus enabling the EU to meet its current objective of a reduction of greenhouse gas emissions of 80-95%, which is effective decarbonisation

EUCO2 80/50 Project - Partner positions

1 METREX position on the project outcomes

- EUCO2 80/50 has its origins in the question posed at the 2005 Granada Meeting on the theme of Climate Change.
 - What should be the response to a metropolitan President or Mayor who asks, "What can we do about climate change?"
 - METREX promoted EUCO2 80/50 in order to be able to provide an answer.
 - METREX participated in EUCO2 80/50 to be able to offer the outcome to the Network as a whole, as a benefit of membership.
 - And, in due course, to roll out the outcome across the wider Europe.
 - The original Interreg IVC Application was structured with these objectives in mind (see the table below)
- EUCO2 80/50 has been a success with all the partners.
 - It was regarded as informative and constructive - raising knowledge and awareness, generating interest and creating a basis for positive follow up action.
 - This success was due to the commitment of the partners, particularly the Lead Partner, in staying with, and collaborating on, the project though difficult times.
 - And the "communitaire" support of the partners for one another through the project funding arrangements.
 - It was also due to the value of GRIP as a scenario tool and the expertise of the Manchester team on climate issues and in Workshop management.
 - The position of GE, sponsor of the project, remains unclear. They observed some Workshops and will have appreciated the positive use of their funding and how GRIP can be used. However, what they propose to do with this knowledge is uncertain.
 - The mixed stakeholder Workshops assisted mutual understanding between sectoral interests.
 - However, the discussions on socio-economic futures were a less successful part of the EUCO2 80/50 process. Participants were not able to make informed assumptions and forecasts.
- METREX undertook to provide an addition to the METREX Practice Benchmark of effective metropolitan spatial planning, to reflect the outcomes of the project, and this has been completed (see www.eurometrex.org).
 - For METREX the project has clarified the future contribution to decarbonisation that can be made by metropolitan areas and one way in which this might be done - through the use of the METREX tool Planning for Energy tool in Metropolitan Areas - by metropolitan spatial planners

| Prospective EUCO2 80/50 METREX partners and extended partnership | | | | | | |
|--|---------------|--------------------|----------------|----------------|---------------------|------------------------|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Baltic | European core | Central Europe | Atlantic space | Alpine space | Mediterranean space | Aegean/Black Sea space |
| 1 Stockholm | Ile-de-France | Berlin-Brandenburg | Glasgow | Emilia-Romagna | Madrid | Athens |
| 2 Arhus | Amsterdam | Katowice | Belfast | Basel | Andalucia | Alexandria |
| 3 Bergen | Antwerp | Kiev | Bordeaux | Bern | Catalunya | Bucarest |
| 4 Bremen | Birmingham | Krakow | Cardiff | Bratislava | Genova | Chisinau |
| 5 Gdansk | Brussels | Lodz | Cork | Budapest | Granada | Istanbul |
| 6 Göteborg | Edinburgh | Minsk | Dublin | Geneve | Marseille | Odessa |
| 7 Hamburg | Frankfurt R-M | Moscow | Eurocity | Ljubljana | Napoli | Oradea |
| 8 Helsinki | Hannover | Poznan | Le Havre | Lombardia | Nice | Sofia |
| 9 Öresund | Köln | Prague | Lisboa | Lyon | Palma | Thessaloniki |
| 10 Oslo | Lille | Saxon Triangle | Liverpool | München | Roma | Timisaora |
| 11 Riga | London | Warszawa | Pais-Vasco | Torino | Sevilla | Valletta |
| 12 St.Petersburg | Luxembourg | Wrocław | Porto | Veneto | Toulouse | |
| 13 Szczecin | Manchester | | SCM | Wien | Valencia | |
| 14 Tallinn | Nürnberg | | | Zagreb | Zaragoza | |
| 15 Turku | Rhein-Neckar | | | Zurich | | |
| 16 Vilnius | Rhurgebeit | | | | | |
| 17 Rotterdam | | | | | | |
| 18 Stuttgart | | | | | | |

2 METREX views on what to do - Planning for Energy in Metropolitan Areas

- Effective progress is not being made on climate change at the international/national levels.
- The EU goalposts have changed from levels of mitigation (60-80%) to effective decarbonisation (80-95%).
- Through METREX there is an opportunity to make a difference at the metropolitan level.
- Especially with the knowledge and insight that has been gained through EUCO2 80/50
- Metropolitan areas can lead the way to energy self-sufficiency, energy security, decarbonisation and, in consequence, improved competitiveness.
- Most European urban energy is wasted.
- Most GHG emissions come from wasted energy.
- Waste energy reduction and energy efficiency can reduce demand significantly.
- Reduced demand can be largely met from urban renewable energy resources.
- Metropolitan energy self-sufficiency is conceivable and achievable.
- The increasing value of energy saving can fund renewable energy investment.
- The argument for this approach is essentially economic with decarbonisation as an outcome, as well as energy security and cost stability.
- A tool is needed to give metropolitan planners the capability to pursue this approach, demonstrate its value (costs and benefits) and specify the investments needed.
- This has been the motivation behind the production the METREX tool - Planning for Energy in Metropolitan Areas
- The Planning for Energy approach was tested through the Demonstration Study carried out for the GCVSDPA and presented to the METREX Berlin Conference

Planning for Energy in Metropolitan Areas

- Planning for Energy is a tool to enable metropolitan spatial planners to make the economic case for a decarbonised energy future and to formulate the investment package and programme required to achieve it.
- Planners always rely on a "reasoned justification" for their responses to issues. The Planning for Energy tool aims to give them the means to provide this in a simple and targeted manner. Specifically.
- It enables planners to assess the potential to reduce the waste of energy from the metropolitan building stock.
- It incorporates a socio-economic view to medium (2025/30) and longer-term (2050) planning horizons and their development and energy demand implications.
- The reduced energy consumption from more energy efficient buildings and the medium and longer term demand for energy can then be compared to the energy generating potential of the future building stock (including land).
- In effect it carries out the same assessment that many building owners do for their individual properties but at the metropolitan scale.
- It then enables the specification of a chosen investment package and programme, over the medium and longer term, and costs this.
- It also assumes the progressive introduction of electromobility and a hydrogen fuelled transport future when considering future energy demand.
- The level of metropolitan energy self-sufficiency and security that might be obtained can then be assessed.
- Self-sufficiency reflects the renewable energy resources that are available within the metropolitan area and energy security reflects the extent to which price stability is within the control of the metropolitan area.
- Renewable energy self-sufficiency and security will be key aspects of metropolitan competitiveness in the future.
- This approach also has a high level of employment creation potential.
- Finally, the extent to which the metropolitan area can decarbonise its medium and longer-term energy supply can be assessed.
- The European Union has emphasised the importance of decoupling the European economy from carbon fuels with the prospect of diminishing supplies and rising costs.

- METREX plans to roll out the Planning for Energy tool to all Members on a geographic basis through the Managing Committee. It's use will be a benefit of membership

3 METREX views on how to do it

- METREX works through Expert Groups and projects to produce self-help good practice.
- So far this has been embodied in the METREX Benchmark of effective metropolitan spatial planning.
- Planning for Energy will be the first interactive online tool that has been produced.
- The intention is to take the approach beyond planning for energy to other supply and demand policy areas such as retailing and housing
- For METREX the next step is the Planning for Energy tool and how to roll out its use.
- There could be a three-step approach.
- Firstly, a pilot process to test and demonstrate its value (the demonstration project - EUCO2plus - was presented to the METREX Berlin Conference using data for the GCVSDPA). This will be done through the METREX Managing Committee and other interested Members.
- Secondly, an "Easy Read" explanation the Planning for Energy tool and a related Powerpoint presentation, with an accompanying commentary.
- Thirdly, an on-line User Manual to support on line use of the tool.
- All the above in EN|DE|ES|IT|FR.
- METREX now has a new Managing Committee, which covers Europe in 8 geographic areas. The Network will work in a more decentralised way.
- Roll out could be through the new METREX Managing Committee. They could hold first meetings of metropolitan areas in, for example, Germany, Italy, the Iberian peninsula, the Baltic, France, central and eastern Europe (CADSES+) and the Netherlands/Belgium (see the table overleaf)
- Essentially, the Network will have a practitioner tool for Planning for Energy.
- Any publicity and promotion could be through the Hamburg Green Capital programme.
- Any political champion would have to be from the Network.
- The use of the Planning for Energy tool would be free to METREX Members, as a benefit of membership, and subject to a user fee for others

| Prospective E>MA roll out | | | | | | | |
|---------------------------|-------------------|---------------|--------------|---------------------------|------------------------|------------------------|----------------|
| 1 Baltic | 2 Germany | 3 France | 4 UK/Ireland | 5 Netherlands/ Belgium | 6 CADSES+ peninsula | 7 Iberian peninsula | 8 Italy |
| 1 Stockholm | Hamburg | Ile-de-France | Glasgow | Amsterdam | Wien | Madrid | Emilia-Romagna |
| 2 Arhus | Bremen | Lille | Birmingham | Antwerp | Alexandria | Andalucia | Genova |
| 3 Bergen | Mitteldeutschland | Bordeaux | Edinburgh | Brussels | Athens | Catalunya | Lombardia |
| 4 Copenhagen | Köln/Bonn | Le Havre | Manchester | Luxembourg | Basel | Eurocity | Napoli |
| 5 Gdansk | Nürnberg | Lyon | Belfast | Rotterdam/dH | Bern | Granada | Roma |
| 6 Göteborg | Rhein-Neckar | Marseille | Cardiff | | Bratislava | Lisboa | Torino |
| 7 Helsinki | Rhurgebeit | Nice | Cork | | Bucarest | Pais-Vasco | Veneto |
| 8 Oslo | Stuttgart | Toulouse | Dublin | | Budapest | Palma | |
| 9 Riga | München | | Liverpool | | Geneve | Porto | |
| 10 St.Petersburg | Berlin/Branden'g | | London | | Istanbul | Sevilla | |
| 11 Szczecin | Frankfurt R-M | | SCM | | Katowice | Valencia | |
| 12 Tallinn | Hannover | | | | Krakow | Zaragoza | |
| 13 Turku | Rhein-Neckar | | | | Ljubljana | | |
| 14 Vilnius | | | | | Moscow | | |
| 15 | | | | | Oradea | | |
| 16 | | | | | Poznan | | |
| 17 | | | | | Prague | | |
| 18 | | | | | Sofia | | |
| 19 | | | | | Thessalonki | | |
| 20 | | | | | Timisaora | | |
| 21 | | | | | Valletta | | |
| 22 | | | | | Warszawa | | |
| 23 | | | | | Wroclaw | | |
| 24 | | | | | Zagreb | | |
| 25 | | | | | Zurich | | |
| | | | | | Chisinau | | |
| | | | | | Kiev | | |
| | | | | | Lodz | | |
| | | | | | Minsk | | |
| | | | | | Odessa | | |

- E>MA has been adopted as the acronym for Planning for Energy in Metropolitan Areas

EUCO2 80/50 Project - Synthesis Meeting Agenda

Location - The University of Manchester, University Place, Room 6.207

Tuesday 12 April 2011

- 9.00 – 9.30** **Opening address**
Simon Guy, Head of School, School of Environment and Development, The University of Manchester.
- 9.30 – 10.45** **Presentation of results from the EUCO2 project**
Sebastian Carney, Graeme Sherriff and Alison Parker, The University of Manchester.
- Discussion*
- 10.45 - 11.15** *Tea/Coffee Break*
- 11.15 – 12.30** **Partner positions on the project and their next steps**
All partners
- 12.30 – 13.30** *Lunch*
- 13.30 – 14.30** **Partnership collective position on the project and the outcome**
- What to do and advice to European metropolitan areas
Outcomes and documentation
- All partners*
- 14.30 – 15.00** *Tea/Coffee Break*
- 15.00 – 16.00** **Partnership collective position on the project and the next steps**
- How to do it and advice to European metropolitan areas
Outputs and dissemination.
- All partners*
- 16.00 – 17.30** **Walking tour of Manchester City Centre**
- 'The History of Manchester's buildings'
Ed Glinert.

Wednesday 13 April 2011

- 9.00 - 10.00** **Consideration and adoption of outcomes from the Tuesday sessions**
Lead Partner and METREX
- The following Programme was modified on the day to include a presentation from Rotterdam*
- 10.00 – 10.45** **Presentation on Manchester as a Low Carbon Economic Area**
Mike Reardon, Director of the Greater Manchester Environment commission at the Association of Greater Manchester Authorities (AGMA).
- Discussion*
- 10.45 – 11.15** *Tea/Coffee Break*
- 11.15 – 12.00** **Presentation on Eco cities and grabs** (Green and Blue Spaces).
Jeremy Carter, School of Environment and Development, The University of Manchester
- Discussion*
- 12.00 – 13.00** *Lunch*
- 13.00 – 13.45** **Presentation on the Urban Splash development in Manchester**
Tom Bloxham, Chancellor of The University of Manchester and Group Chairman/Co-founder of Urban Splash Group Ltd
- Discussion*
- 13.45 – 17.45** Visit to Chimney Pot Park, Urban Splash development in Salford and the Stamford Brook, Commercial, Sustainable Housing development on the Dunham Massey Estate
- Coach to pick-up from the University at 13.30 and drop-off at Holiday Inn Express Hotel at 17.30*
- Evening meal - Location and time TBA*

Thursday 14 April 2011

- 9.30 – 17.00** **All day training session – How to use the GRIP scenario tool.**
Sebastian Carney, Graeme Sherriff and Alison Parker, The University of Manchester.
- Includes Tea/coffee break, morning and afternoon and lunch 12.30 – 13.30*
- End of Workshop*

EUCO2 80/50 Project - Synthesis Meeting Attendance

Attending - Metropolitan area partners 1-10

| | | |
|----|----------------------------|-------------------------------|
| 1 | Albano Carneiro | Porto |
| 2 | Alberto Cavallero | Torino |
| | Alison Parker | Manchester |
| | Elena Pedon | Torino |
| | Emily Prestwood | Manchester |
| 3 | Erwan Cordeau | Paris |
| | Genevieve Danchin | Paris |
| | Gianfranco Fiora | Torino |
| | Graeme Sherriff | Manchester |
| 4 | Irene Aguilo Vidal | Madrid |
| 5 | Irma Karjalainen | Helsinki |
| | Johannes Lounasheimo | Helsinki |
| 6 | Koldo Verheij | Rotterdam |
| | Leena Mikkonen Young | Helsinki |
| 7 | Markus Siehr | Stuttgart |
| 8 | Michael Erman | Stockholm |
| 9 | Michael Voll | Frankfurt |
| | Nico Tillie | Rotterdam |
| | Pia Tynys | Helsinki |
| 10 | Rainer Scheppelmann | Hamburg - Lead Partner |
| | Rita Sousa | Porto |
| | Roger Read | METREX |
| | Sara Taveira | Porto |
| | Sarah Moutury | Brussels |
| | Sebastian Carney | Manchester |
| | Tim Page | METREX |

Apologies - Metropolitan area partners 11-14

| | | |
|----|---------------------|-----------|
| 11 | Grahame Buchan | Glasgow |
| 12 | Peter Austin | Oslo |
| 13 | Tin Meylemans | Bruxelles |
| 14 | Valeria Vanella | Napoli |
| | Mariarosaria Albano | Napoli |

