

International Energy Agency

**Implementation of Energy Strategies in
Communities (Annex 63)
Volume 0: Documentation of workshops
and involvement of cities**

**Energy in Buildings and Communities Programme
September 2017**



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Preface

THE INTERNATIONAL ENERGY AGENCY

The International Energy Agency (IEA) was established in 1974 within the framework of the Organisation for Economic Co-operation and Development (OECD) to implement an international energy programme. A basic aim of the IEA is to foster international co-operation among the 29 IEA participating countries and to increase energy security through energy research, development and demonstration in the fields of technologies for energy efficiency and renewable energy sources.

THE IEA ENERGY IN BUILDINGS AND COMMUNITIES PROGRAMME

The IEA co-ordinates international energy research and development (R&D) activities through a comprehensive portfolio of Technology Collaboration Programmes. The mission of the IEA Energy in Buildings and Communities (IEA EBC) Programme is to develop and facilitate the integration of technologies and processes for energy efficiency and conservation into healthy, low emission, and sustainable buildings and communities, through innovation and research. (Until March 2013, the IEA EBC Programme was known as the IEA Energy Conservation in Buildings and Community Systems Programme, ECBCS.)

The R&D strategies of the IEA EBC Programme are derived from research drivers, national programmes within IEA countries, and the IEA Future Buildings Forum Think Tank Workshops. These R&D strategies aim to exploit technological opportunities to save energy in the buildings sector, and to remove technical obstacles to market penetration of new energy efficient technologies. The R&D strategies apply to residential, commercial, office buildings and community systems, and will impact the building industry in five areas of focus for R&D activities:

- Integrated planning and building design
- Building energy systems
- Building envelope
- Community scale methods
- Real building energy use

THE EXECUTIVE COMMITTEE

Overall control of the IEA EBC Programme is maintained by an Executive Committee, which not only monitors existing projects, but also identifies new strategic areas in which collaborative efforts may be beneficial. As the Programme is based on a contract with the IEA, the projects are legally established as Annexes to the IEA EBC Implementing Agreement. At the present time, the following projects have been initiated by the IEA EBC Executive Committee, with completed projects identified by (*)

and joint projects with the IEA Solar Heating and Cooling Technology Collaboration Programme by (☀):

- Annex 1: Load Energy Determination of Buildings (*)
- Annex 2: Ekistics and Advanced Community Energy Systems (*)
- Annex 3: Energy Conservation in Residential Buildings (*)
- Annex 4: Glasgow Commercial Building Monitoring (*)
- Annex 5: Air Infiltration and Ventilation Centre
- Annex 6: Energy Systems and Design of Communities (*)
- Annex 7: Local Government Energy Planning (*)
- Annex 8: Inhabitants Behaviour with Regard to Ventilation (*)
- Annex 9: Minimum Ventilation Rates (*)
- Annex 10: Building HVAC System Simulation (*)
- Annex 11: Energy Auditing (*)
- Annex 12: Windows and Fenestration (*)
- Annex 13: Energy Management in Hospitals (*)
- Annex 14: Condensation and Energy (*)
- Annex 15: Energy Efficiency in Schools (*)
- Annex 16: BEMS 1- User Interfaces and System Integration (*)
- Annex 17: BEMS 2- Evaluation and Emulation Techniques (*)
- Annex 18: Demand Controlled Ventilation Systems (*)
- Annex 19: Low Slope Roof Systems (*)
- Annex 20: Air Flow Patterns within Buildings (*)
- Annex 21: Thermal Modelling (*)
- Annex 22: Energy Efficient Communities (*)
- Annex 23: Multi Zone Air Flow Modelling (COMIS) (*)
- Annex 24: Heat, Air and Moisture Transfer in Envelopes (*)
- Annex 25: Real time HVAC Simulation (*)
- Annex 26: Energy Efficient Ventilation of Large Enclosures (*)
- Annex 27: Evaluation and Demonstration of Domestic Ventilation Systems (*)
- Annex 28: Low Energy Cooling Systems (*)
- Annex 29: ☀ Daylight in Buildings (*)
- Annex 30: Bringing Simulation to Application (*)
- Annex 31: Energy-Related Environmental Impact of Buildings (*)
- Annex 32: Integral Building Envelope Performance Assessment (*)
- Annex 33: Advanced Local Energy Planning (*)
- Annex 34: Computer-Aided Evaluation of HVAC System Performance (*)
- Annex 35: Design of Energy Efficient Hybrid Ventilation (HYBVENT) (*)
- Annex 36: Retrofitting of Educational Buildings (*)
- Annex 37: Low Exergy Systems for Heating and Cooling of Buildings (LowEx) (*)
- Annex 38: ☀ Solar Sustainable Housing (*)
- Annex 39: High Performance Insulation Systems (*)

- Annex 40: Building Commissioning to Improve Energy Performance (*)
- Annex 41: Whole Building Heat, Air and Moisture Response (MOIST-ENG) (*)
- Annex 42: The Simulation of Building-Integrated Fuel Cell and Other Cogeneration Systems (FC+COGEN-SIM) (*)
- Annex 43: ☀ Testing and Validation of Building Energy Simulation Tools (*)
- Annex 44: Integrating Environmentally Responsive Elements in Buildings (*)
- Annex 45: Energy Efficient Electric Lighting for Buildings (*)
- Annex 46: Holistic Assessment Tool-kit on Energy Efficient Retrofit Measures for Government Buildings (EnERGo) (*)
- Annex 47: Cost-Effective Commissioning for Existing and Low Energy Buildings (*)
- Annex 48: Heat Pumping and Reversible Air Conditioning (*)
- Annex 49: Low Exergy Systems for High Performance Buildings and Communities (*)
- Annex 50: Prefabricated Systems for Low Energy Renovation of Residential Buildings (*)
- Annex 51: Energy Efficient Communities (*)
- Annex 52: ☀ Towards Net Zero Energy Solar Buildings (*)
- Annex 53: Total Energy Use in Buildings: Analysis and Evaluation Methods (*)
- Annex 54: Integration of Micro-Generation and Related Energy Technologies in Buildings (*)
- Annex 55: Reliability of Energy Efficient Building Retrofitting - Probability Assessment of Performance and Cost (RAP-RETRO) (*)
- Annex 56: Cost Effective Energy and CO₂ Emissions Optimization in Building Renovation (*)
- Annex 57: Evaluation of Embodied Energy and CO₂ Equivalent Emissions for Building Construction (*)
- Annex 58: Reliable Building Energy Performance Characterisation Based on Full Scale Dynamic Measurements (*)
- Annex 59: High Temperature Cooling and Low Temperature Heating in Buildings (*)
- Annex 60: New Generation Computational Tools for Building and Community Energy Systems (*)
- Annex 61: Business and Technical Concepts for Deep Energy Retrofit of Public Buildings (*)
- Annex 62: Ventilative Cooling
- Annex 63: Implementation of Energy Strategies in Communities
- Annex 64: LowEx Communities - Optimised Performance of Energy Supply Systems with Exergy Principles
- Annex 65: Long-Term Performance of Super-Insulating Materials in Building Components and Systems
- Annex 66: Definition and Simulation of Occupant Behavior in Buildings
- Annex 67: Energy Flexible Buildings

- Annex 68: Indoor Air Quality Design and Control in Low Energy Residential Buildings
- Annex 69: Strategy and Practice of Adaptive Thermal Comfort in Low Energy Buildings
- Annex 70: Energy Epidemiology: Analysis of Real Building Energy Use at Scale
- Annex 71: Building Energy Performance Assessment Based on In-situ Measurements
- Annex 72: Assessing Life Cycle Related Environmental Impacts Caused by Buildings
- Annex 73: Towards Net Zero Energy Public Communities
- Annex 74: Competition and Living Lab Platform
- Annex 75: Cost-effective Building Renovation at District Level Combining Energy Efficiency and Renewables
- Annex 76: ☀ Deep Renovation of Historic Buildings Towards Lowest Possible Energy Demand and CO₂ Emissions
- Annex 77: ☀ Integrated Solutions for Daylight and Electric Lighting

Working Group - Energy Efficiency in Educational Buildings (*)

Working Group - Indicators of Energy Efficiency in Cold Climate Buildings (*)

Working Group - Annex 36 Extension: The Energy Concept Adviser (*)

Working Group - HVAC Energy Calculation Methodologies for Non-residential Buildings

Project Overview

BACKGROUND

Energy Efficient Communities (IEA-EBC Annex 51) suggested that successful urban energy planning is only possible, if energy planning is integrated in the entire urban planning process. However, research in both Annex 51 and Annex 63 has found that in many countries consideration of energy issues is missing in urban planning processes. This is of great concern, since, with the growing challenge of climate change, municipalities and energy utilities are charged with implementing both measures that adapt to the present conditions and measures that mitigate against future impacts. Both parties, municipalities and energy utilities, must coordinate their actions and both need a comprehensive set of tools and strategies to manage their resources so as to minimise the generation of greenhouse gases.

The linkage between urban form, energy use and climate change has been recognised for many years yet there still remain significant barriers separating the goals of urban planning and those of efficient energy delivery. In current practices energy related issues are still isolated from virtually all other municipal services; building codes for example often limit their scope to building safety and ignore the impact of energy consumption. By integrating strategies about optimizing supply, delivery and consumption of energy with (municipal or utility) planning protocols both municipalities and utilities can deliver to their constituents a powerful set of strategies with which to address climate change.

A natural connection should exist between urban development and energy development. Historically, the separation of each field's priorities and practices has created an energy efficiency challenge that requires a new and improved set of planning tools and strategies.

CONTENT

IEA-EBC-Annex 63 aims to identify strategies that can unify urban and energy planning communities and allow both parties to engage in the process of change to reach long term targets. The research addresses key barriers that expand the scope of planning and lead to a more comprehensive understanding of the new, urban, low-carbon environment. The outcome of this project is that governments, urban decision makers, utilities and urban planning departments can develop a clearer understanding as to how they integrate energy issues into urban planning processes and what actions they must undertake and when, in order to be successful.

PARTICIPATING COUNTRIES

Following countries (represented by 19 organisations) have been participating in Annex 63: Austria, Canada, Denmark, France, Germany, Ireland, Japan, the Netherlands, Norway, Switzerland and the United States of America.

INVOLVED CITIES

Following cities were involved in Annex 63: Salzburg, Vienna (Austria), Burlington, Guelph, London (Ontario), Toronto (Canada), Egedal, Middelfart, Roskilde, Skive (Denmark), Lille, Strasbourg (France), Aachen, Ludwigsburg, Karlsruhe (Germany), Kitakyushu, Yokohama (Japan), Maastricht (the Netherlands), Oslo, Bergen (Norway), Basel (Switzerland), Minneapolis (USA). Also Graz (Austria), Ottawa, Pickering (Canada), Ballerup, Lyngby (Denmark), Bottrop (Germany), Amsterdam, Parkstad (the Netherlands) and Zürich (Switzerland) supported the project team with information and case studies.

METHODOLOGY

To better understand the composition of suitable energy strategies, the research program adopted the following approach:

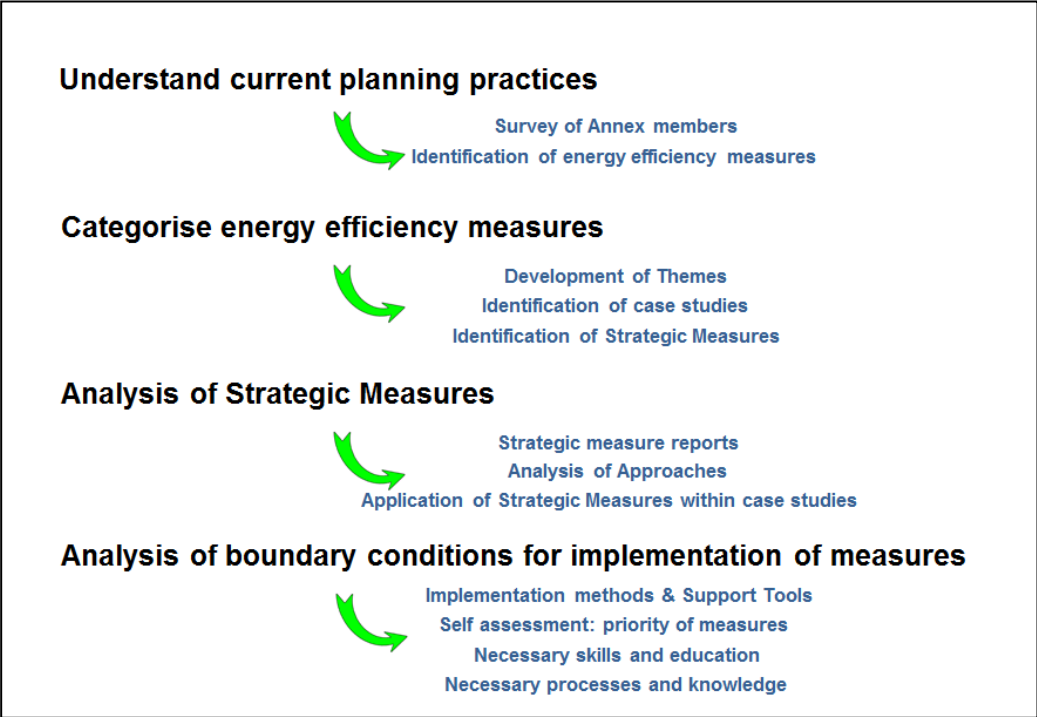


Figure A: Research Methodology (NRCan, 2017)

OUTPUTS

The results of Annex 63 (Implementation of Energy Strategies in Communities) are documented in six Volumes (sequenced according to the development progress). For orientation, the name and content of each Volume is described in the following overview:

Volume 0 – Documentation of workshops and involvement of cities: This report describes the information exchange and dissemination activities undertaken within this research. The information exchange activities were essential to get and understand all relevant information for answering the research question and to contribute to practical appropriability. In total 143 information exchange activities with 2,394 people were carried out.

Volume 1 – Inventory of measures: This report describes the existing national political framework conditions, energy and land-use planning processes, strategies for energy planning and existing national measures in the field of urban and energy planning. In this research, the term measure refers to any action, program, policy or other activity that can demonstrate or influence a change in process. Amongst other background information, 22 planning processes and 89 measures from 11 countries are described in detail in this report.

Volume 2 – Development of strategic measures: This report describes the further development of the analysed measures from Volume 1 into strategic measures. As with the term measure, a strategic measure refers to an essential measure in concept that can be used to develop individual implementation strategies on a local level for part or the whole life cycle of a project (from the first vision to monitoring of the implemented solution). The developed strategic measures deal with the following topics:

- Setting Vision and Targets
- Developing Renewable Energy Strategies
- Making Full use of Legal Frameworks
- Designing an Urban Competition Processes
- Making use of Tools Supporting the Decision Making Process
- Implementing Monitoring of Energy Consumption and GHG Emission practices
- Enhancing Stakeholder Engagement & Involvement
- Including Socio Economic Criteria
- Implementing Effective and Efficient Organisational Processes

The report includes both a summary of each strategic measure supported by nine appendices, each a detailed description of each strategic measure.

Volume 3 – Application of strategic measures: This report describes, for different scales (city, district and project level) and for 29 conceptualised case studies, how implementation champions can apply the strategic measures from Volume 2. Implementation champions are hereby understood as stakeholders in the city who take the initiative to lead and facilitate implementation processes.

Volume 4 – Stakeholder support materials: This report describes, in more detail, within the framework of Annex 63 elaborated stakeholder support materials and their application. The materials deal with the following topics:

- Municipality Self-Assessment tool
- Capacity building and skills
- Workshop format and procedures
- Informational slides for presentations
- Education materials

Volume 5 – Recommendations: This report contains central recommendations for different target groups (e.g. policy makers, researchers, planners), for implementation and for further investigation. Justifications and examples in the field of urban and energy planning are central elements of this report.

HOW TO READ

Depending on the interest of the reader whether the focus might be on the application of results or on the methodology of producing the results, figure B shows the sequence of how best to use the Volumes.

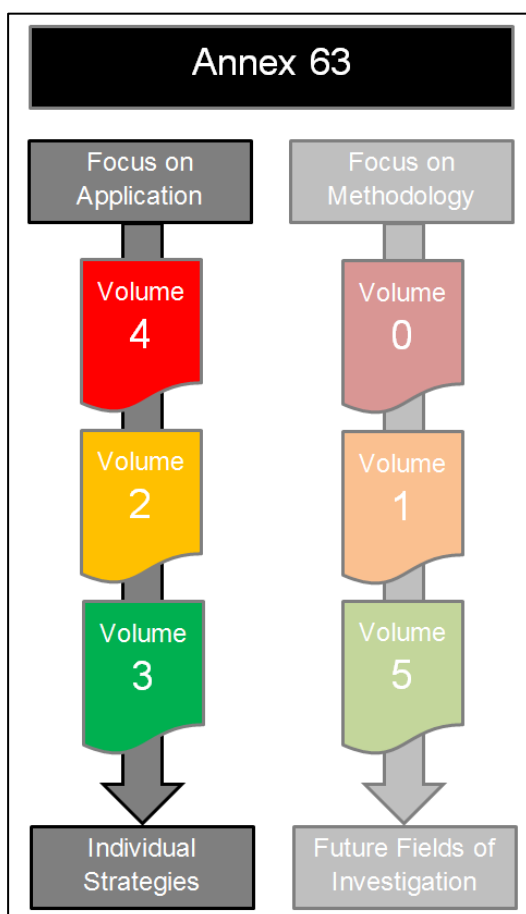


Figure B: How readers should apply the produced documents (SIR, 2017)

If the focus of the reader lies on the application of the elaborated results, the Volume 4 should be read first. The appendix of Volume 4 contains a municipality self-assessment tool that allows the reader to identify the strengths and weaknesses within the current municipal structure. Volume 4 also contains additional working materials (e.g. necessary capacities and skills, suitable workshop formats, informational slides for presentations and education materials) that support the implementation of strategic measures. Recommendations for the successful implementation of specific strategic measures can be found in appendix of Volume 2, leading to the application of different strategic measures as outlined in Volume 3. In this way, the reader gains from the three reports all relevant information for the development of individual implementation strategies.

If the reader is interested on methodological aspects of Annex 63, Volume 0 should be read first. Volume 0 contains the central information regarding the information exchange activities and input from the variety of annex stakeholders (cities, local stakeholder groups, project team, national and international networks, IEA Technology Collaboration Programmes). Principal output of this consultation process is also described in detail in Volume 1 (local framework conditions in 11 countries and 22

cities). Finally, all relevant recommendations for different target groups are summarised in Volume 5. Again, the reader gets in the three reports all the relevant information for further fields of investigation.

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1. Introduction

The objective of Annex 63 is to give recommendations to cities on procedures for the implementation of optimized energy strategies at the scale of communities in the urban development process. “Community” is hereby understood as a functioning part of a city and can be a municipality or a smaller sub-area, for example a district or a neighbourhood.

Each city is unique and has varied approaches to:

- urban planning processes, to manage the transformation of the urban development,
- energy planning processes, to ensure the sustainable energy supply of urban areas and
- measures, to influence the implementation process (e.g. action, programme, policy or other activity that can demonstrate or influence a change in process).

As Annex 63 is focusing strongly on bringing together national and international knowledge on these issues, several national and international information exchange activities were carried to

- collect and understand different local boundary conditions (i.e. contexts);
- identify and understand different local approaches, success features and bottle necks (i.e. barriers);
- develop and share international approaches for implement energy strategies in communities;
- get input and feedback on stakeholder support materials and recommendations that were addressed in the framework of this project and
- create informed solutions by including relevant stakeholders into the development process.

The content of this report is the description of the information exchange and dissemination activities completed during the course of the Annex project. The report details the stakeholders that were engaged, the communication highlights, the lessons learned and the ongoing national information exchange activities.

2. Project specific communication concept

As visualised in Figure 1, the planned and implemented development process of Annex 63 is comparable to a journey. Typical for a journey is that the travelers start somewhere and get in contact during the journey with different people and cultures. At the end of the journey, the travelers get back with fresh and new ideas.

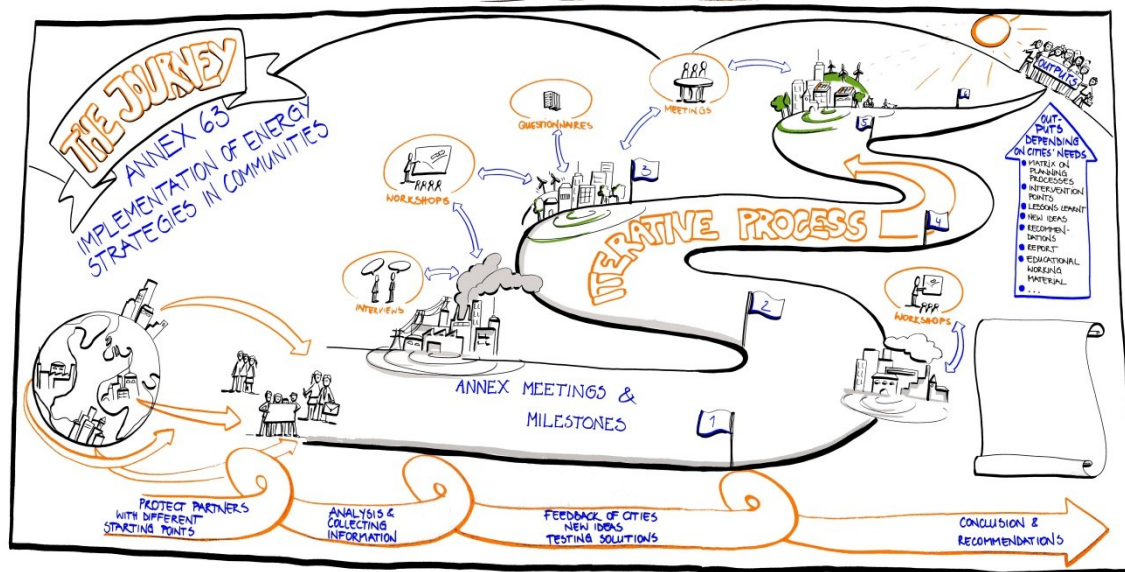


Figure 1: The journey: Visualisation of the methodological approach (Anita Berner, 2015)

These core elements of a journey were also the main idea of Annex 63: To create informed solutions – instead of “reinventing the wheel” or produce inefficient guidebooks – by engaging the views of different stakeholders during the development process. To organise and manage this involvement, a communication concept was elaborated from each project partner at the beginning of the project.

Content of these concepts were: Description of the (local/national) communication targets, topics, methods, timeframe and stakeholder groups.

The main elements of these concepts are described in the following section. Details are described in chapter 4.

COMMUNICATION TARGETS

The target of the communication was to exchange knowledge and also to disseminate the results in several local, national and international channels and formats.

COMMUNICATION TOPICS

As visualised in Figure 2, each stakeholder group had specific knowledge that was relevant for the development of strategic measures for communities (e.g local/national planning processes, measures, best practices and working materials).

This existing knowledge from national and international experts was identified (step 1), structured and developed further (step 2) and shared back with the different target groups (step 3 and 4).

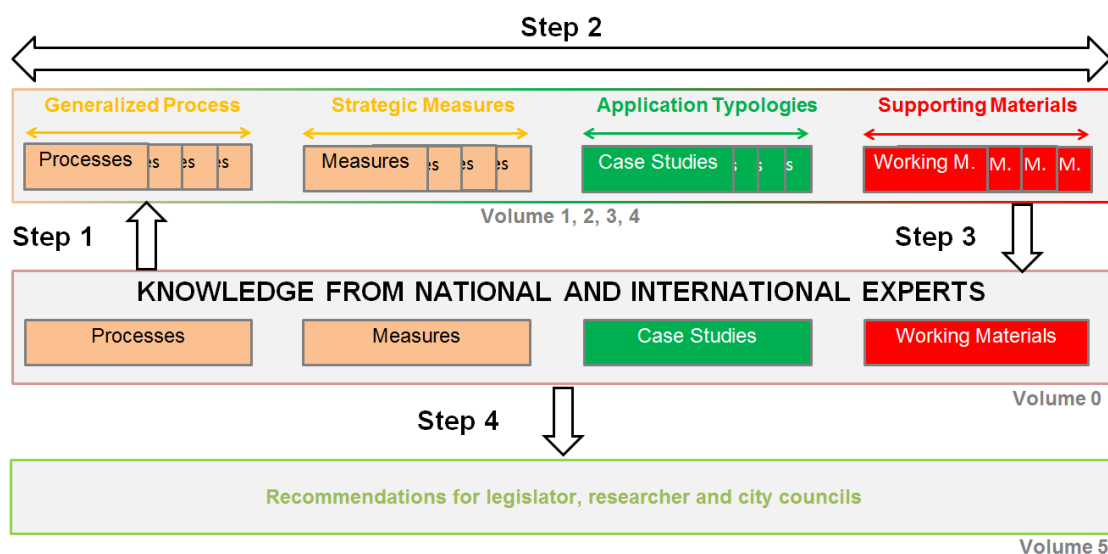


Figure 2: Interplay between the different reports and resulting communication ways (SIR, 2017)

COMMUNICATION METHODS

The required communication method was informed by the (communication) targets. Generally the following two methods were in used:

- Information exchanges: To gather information, feedback meetings and workshops were carried out. Meetings are typical formats to gather information and to talk about concrete questions and problems; in contrast, workshops are suited to creating new ideas and to solving problems.
- Dissemination activities: To disseminate the results, presentations and publications in print and online media were used.

COMMUNICATION TIMEFRAME

Communication was an ongoing task within the Annex 63 project and several information exchange activities are ongoing (see also chapter 6).

STAKEHOLDER GROUPS

All relevant stakeholders are described in chapter 3.

3. Annex 63 Stakeholders

The term “stakeholder” commonly reflects a party that can have an impact or is impacted by a decision, policy, plan, etc. (Bryson, 2004). Based on this definition, the following Annex 63 stakeholders were identified:

- Annex 63 – participating cities
- Local stakeholder groups
- Annex 63 – project team
- National and international networks
- International Energy Agency Technology Collaboration Programme

Each stakeholder group is described in detail in the following sections.

3.1. Annex 63 – participating cities

Annex 63 primarily served the needs of urban decision makers and urban and energy planning departments. Thus, cities were and are a central stakeholder group of Annex 63. On the one hand they are impacted by the elaborated results (e.g. recognizing trends). On the other hand, they can use the results to have an impact on processes on a local level (think global – act local). To create solutions, the following 22 cities were involved directly in the development process:

Table 1: Cities that were involved in Annex 63

Country	Participating cities	Number of inhabitants
Austria	Salzburg	150.887
	Vienna	1.840.226
Canada	Burlington	175.779
	Guelph	121.688
	London (Ontario)	366.151
	Toronto	2.615.060
Denmark	Egedal	42.297
	Middelfart	14.815
	Roskilde	50.046
	Skive	20.617
France	Lille	233.897
	Strasbourg	275.718
Germany	Aachen	245.885
	Ludwigsburg	87.207
	Karlsruhe	307.755

Country	Participating cities	Number of inhabitants
Japan	Kitakyushu	956.772
	Yokohama	3.732.616
Netherlands	Maastricht	122.418
Norway	Oslo	660.987
	Bergen	278.120
Switzerland	Basel	175.131
USA	Minneapolis	382.578

As listed in Table 1, the cities represent different countries and therefore different planning cultures, different kinds of cities (small towns and large central cities) and varied organisational structures of cities. Also, some cities, like Graz (Austria), Ottawa, Pickering (Canada), Ballerup, Lyngby (Denmark), Bottrop (Germany), Amsterdam, Parkstad (the Netherlands) and Zürich (Switzerland) supported the project team with information and case studies.

3.2. Local stakeholder groups

As visualised in Figure 3, a variety of local stakeholder groups (e.g. inhabitants, energy supply companies), that are part of the participating cities, were a focus group in Annex 63.

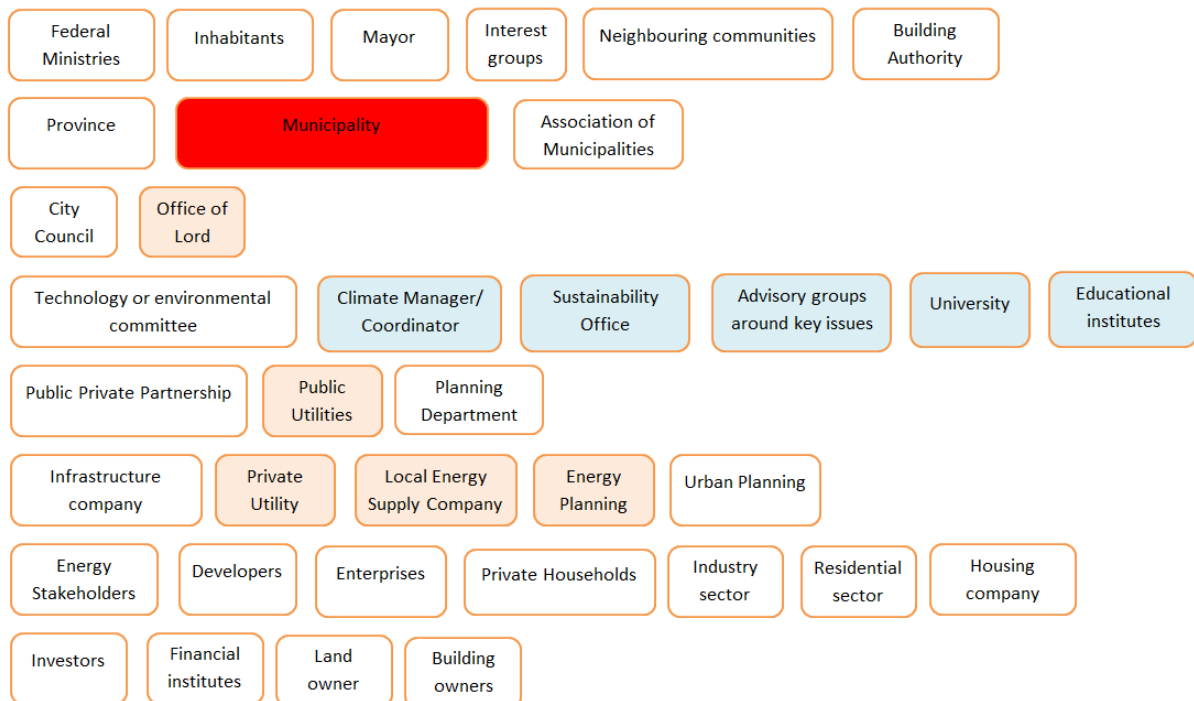


Figure 3: Annex 63 stakeholder map; red: main target group; orange: relevant stakeholders; blue: supporting groups; white: stakeholders (ZUYD University, 2016)

These stakeholder groups were involved relative to specific topics and also participated in national information exchange and dissemination activities. These stakeholder

groups are part of the participating cities and represent a broad mix of different interests.

3.3. Annex 63 – project team

Within the IEA-EBC Programme, 19 organisations from 11 countries worldwide were involved in Annex 63:

Table 2: Organisations that were involved in Annex 63

Country	Organisation	Kind of organisation
Austria	SIR - Salzburg Institute for Regional Planning and Housing	Consulting company
Canada	Natural Resources Canada	Ministry
Denmark	Aalborg University	University
	Cenergia a part of Kuben Management	Consulting company
	DTU - Technical University of Denmark	University
France	ElFER - European Institute for Energy Research	Research facility
Germany	B.&S.U. – Beratungs- und Service-Gesellschaft Umwelt mbH.	Consulting company
	Deutscher Verband für Wohnungswesen, Städtebau und Raumordnung e.V.	Consulting company
	Fraunhofer-Institut für Solare Energiesysteme ISE	Research facility
	IREES - Institut für Ressourceneffizienz und Energiestrategien	Consulting company
	RWTH Aachen University, E.ON Energy Research Center, Institute for Energy Efficient Buildings and Indoor Climate	Research facility
Ireland	SEAI - Sustainable Energy Authority of Ireland	Consulting company
Japan	Osaka University - Division of Sustainable Energy and Environmental Engineering	University
Netherlands	ZUYD University & Netherlands Enterprise Agency (RVO.nl)	University
Norway	NTNU - Norwegian University of Science and Technology	University
	SINTEF Building and Infrastructure	Research facility
Switzerland	ENCO - Energie-Consulting AG	Consulting company
	Intep - Integrale Planung GmbH	Consulting company
USA	University of Minnesota	University

As listed in Table 2, the organisations represent different countries and therefore different boundary conditions. The partners included a range of expertise, representing a range of disciplines (e.g. urban planning, engineering, landscape architecture) and methodological approaches.

3.4. National and international networks

Each project partner of Annex 63 was not only in contact with at least one city but had also contact with at least one relevant network partner:

Table 3: National and international networks that were involved in Annex 63

Country	Network partner	Description
Austria	bmvit - IEA Research cooperation	National platform for the information exchange between the IEA programmes and national research programmes
	EEA - European Energy Award	Network of 1.397 municipalities in 8 European countries
	Austrian Association of Cities and Towns	National network of 252 Austrian cities
	e5-programme	National network of 194 Austrian municipalities
	Network of Austrian Smart Cities (Salzburg, Wien, Graz, Innsbruck, Villach)	National network of 5 Austrian smart cities
	Smart City Salzburg	Local Platform for the implementation of the Masterplan of the city of Salzburg
	Network Urban Learning project	Temporary international network of experts in the field of urban and energy planning
	D-A-CH project network	Temporary international network of the cities Karlsruhe, Salzburg and Winterthur
Canada	Karen Farbridge & ASSOCIATES	Consulting company for business, governments and organizations
Denmark	Energy suppliers	Three local district heating network and one electricity network/company
	Professional units for planners	National network: Energi strategiskplanlægning, IDA, Miljøstrategisk årsmøde
	Cooperation network Malmö - Copenhagen	Regional network: interreg øresund
France	ADEME - Agence de l'Environnement et de la Maîtrise de l'Énergie	National energy agency
	Association of planners	National network
Germany	URBAN network	Network of German and Austrian cities
	Energy suppliers	Regional network
	Network of local energy advisers	Regional network
	Network of certified architects	National network

Country	Network partner	Description
	and engineers	
	Network of certified building and modernisation enterprises	National network
	Network of local community leaders	Local networks
	D-A-CH project network	Temporary international network of the cities Karlsruhe, Salzburg and Winterthur
Ireland	Research community	National network
Japan	National Committee of Annex 63	Committee of academic experts, municipalities and private companies consists of city gas companies, energy equipment manufacturer and general contractor. Managed by Institute for Building Environment and Energy Conservation (IBEC).
	Associates for building field of IEA	National platform for the information exchange among IEA-EBC programmes.
Netherlands	Netherlands Enterprise Agency (Rijksdienst voor Ondernemend Nederland)	Netherlands Enterprise Agency (RVO.nl) encourages entrepreneurs in sustainable, agrarian, innovative and international business. Netherlands Enterprise Agency is part of the Ministry of Economic Affairs and works at the instigation of ministries and the European Union. Some activities of the Commodities Boards are also included. The Agency works in The Netherlands and abroad with governments, knowledge centres, international organisations and countless other partners.
Norway	PI-SEC project network	Temporary network of experts in the field of urban and energy planning
Switzerland	Energiestadt network	National network of 361 Swiss cities
	City association	National network of 131 Swiss cities
	Planning association	National network
	National government	National network
USA	Research community	National network

As listed in Table 3, Annex 63 project team members interacted with networks from the local to international scales. Networks ranged from small temporary (project) networks to large, professional organised networks.

3.1. International Energy Agency TCPs

As the project had an international context, the International Energy Agency (IEA) is also a central stakeholder group. The IEA offers 39 Technology Collaboration Programms (TCPs) for 29 member countries, whereby one TCP manages several projects. Annex 63 was hosted in the Energy Buildings and Communities Programme (EBC). Annex 63 had points of contact not only to other projects within the IEA-EBC Programme, but also to other TCPs as Annex 63 address different topics. All IEA programmes / projects that were involved active in Annex 63 are listed in the following table:

Table 4: IEA TCPs that were involved in Annex 63

IEA Technology collaboration programme	Involved IEA programme / project
Energy in Buildings and Communities (EBC)	EBC programme management
	Annex 56 “Cost-Effective Energy and CO2 Emission Optimization in Building Renovation”
	Annex 64 “Optimized Performance of Community Energy Supply Systems with Exergy Principles”
Energy Storage (ECES)	ECES programme management
Heat Pump Centre (HPC)	HPC programme management
Solar Heating and Cooling Programme (SHC)	SHC programme management
	Task 51 “Solar Energy in Urban Planning”
Demand Side Management (DSM)	DSM programme management

As listed in Table 4, the involvement of IEA TCPs extends from management programmes to specific IEA projects. Thus, the Annex 63 had a strong connection to several IEA topics.

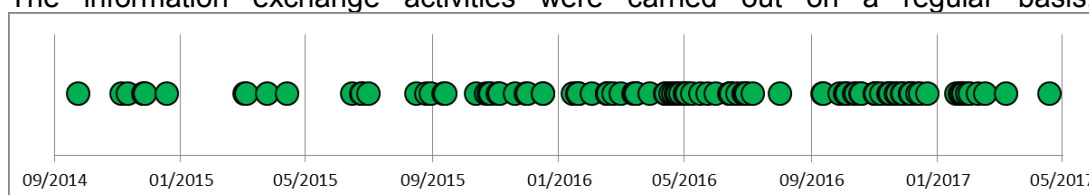
4. Communication Highlights

The following chapter describes the highlights of the information exchange and dissemination activities carried out by the Annex 63 project team.

4.1. Carried out information exchange activities

Within the framework of Annex 63, **143 information exchange activities** between 2,394 people were carried out between September 2014 and May 2017:

- The information exchange activities were carried out on a regular basis:



- 85 % of them were carried out in Europe; all others in Asia (11 %), North America (3 %) and Australia (1 %).
- 60 % of them were carried out as meetings; all others as workshops (40 %). The meetings were used to collect information; the workshops were used to explore ideas and gather feedback on the results.
- 93 % of them had a strong national focus (i.e. level of cities); all other information exchange activities (7 %) were carried out on an international level (i.e. among representatives from different countries).
- On average, 16 people were involved into the information exchange activities.

A summary of each information exchange category is described in the following sections.

4.1.1. National information exchange activities

In total, 133 national information exchange activities were carried out. Eighty-six of them were organised as meetings to collect information and to discuss specific questions and problems. Forty-seven of all carried out national information exchange activities were organised as workshop and used to get feedback and input from the participating cities that were the primary target group of these activities.

Details on the national information exchange activities are listed in Appendix A.

The outcomes were integrated directly in the development process and are documented in the specific reports of Annex 63.

4.1.2. International information exchange activities (internal)

In total, 10 international information exchange activities were carried out. Four of them were organised as internal workshops; the others as external workshops. The internal information exchange activities were primarily used by the international project team members to analyse the collected (national) information and to develop the strategic measures for communities (drafts).

Data on the internal international exchange activities are listed in Table 5.

Table 5: Carried out internal international exchange activities

Description	Date	Venue	Number of participants
IEA EBC Annex 63 internal Workshop 1	09.05.2016	Biel	23
IEA EBC Annex 63 internal Workshop 2	06.10.2016	Leiden	22
IEA EBC Annex 63 internal Workshop 3	09.02.2017	Copenhagen	10
IEA EBC Annex 63 internal Workshop 4	19.04.2017	Kitakyushu	23

The outcomes were integrated directly in the development process and are documented in the specific reports of Annex 63.

4.1.3. International information exchange activities (external)

The Annex 63 project team organised or participated on 6 international workshops to urban and energy planning issues. These information exchange activities on international level were primarily used from the project partners to get feedback from external experts and cities. The aim of these activities was to validate the results of Annex 63 and to get input for improvements.

The data on these external international exchange activities are listed in Table 6.

Table 6: Carried out external international exchange activities

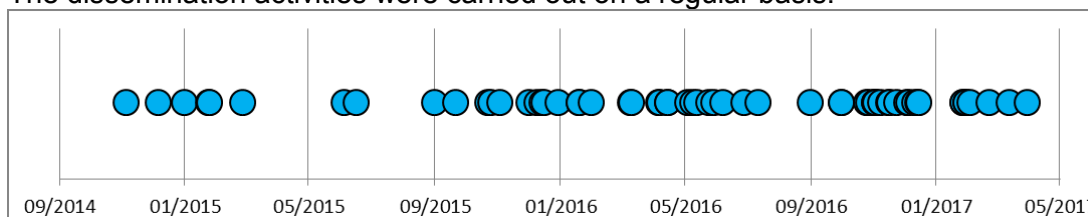
Description	Date	Venue	Number of participants
IEA EBC Annex 63 external Workshop 1	24.09.2014	Dublin	31
IEA EBC Annex 63 external Workshop 2	14.10.2015	Minneapolis	36
IEA EBC Annex 63 external Workshop 3	05.10.2016	Amsterdam	41
IEA ExCo Meeting Operating Agents Workshops	17.11.2016	Sydney	42
IEA Heat Pump Conference Joint Workshop IEA EBC Annex 63&64	15.05.2017	Rotterdam	40
Renewable Cities – Global Learning Forum Conference	18.05.2017	Vancouver	40

The outcomes were integrated directly in the development process and are documented in the specific reports of Annex 63.

4.2. Carried out dissemination activities

Within the framework of Annex 63, 63 dissemination activities were carried out between September 2014 and May 2017:

- The dissemination activities were carried out on a regular basis:



- The most common dissemination channels were presentation (46 %), print media (21 %), online media (17 %) and papers (16 %).
- 52 % of the dissemination activities were aimed at stakeholders in Europe; all other were aimed at an international (expert) group (34 %) with distribution via digital networks or stakeholders in North America (11 %) and Asia (2 %).

The summary of each dissemination category is described in the following sections.

4.2.1. Presentations

Presentations were a popular media to disseminate the results from Annex 63. In total, 29 presentations were carried out; 21 of them were held at national conferences; with the remainder at international conferences.

The corner data of the carried out presentations are listed in Table 7.

Table 7: Carried out presentations

Description / Title	Date	Venue / event	Target Group
Implementation of energy strategies in communities	05.11.2014	Helsinki - ExCo Technical day	Worldwide
Implementation of Energy Strategies in Communities - from Pilot Project in Salzburg, Austria, to Urban Strategy	25.01.2015	Chicago - Chicago 2015 Winter Conference	Worldwide
Questionnaire discussion	05.06.2015	Montreal - Telecon Group	Canada
Implementation of energy strategies in communities	17.06.2015	Lisbon - ExCo Technical day	Worldwide
Public session of district administration	02.12.2015	Aachen-Brand - on-site presentation	Germany

Description / Title	Date	Venue / event	Target Group
Bewertung: Genügt ein Tool oder braucht es mehr?	10.12.2015	Wien - ÖGUT Themenfrühstück	Austria
Umsetzungserfahrung aus e5 - Gemeinden	15.12.2015	Wien - SPRINKLE-Abschlusskonferenz	Austria
Energy neutral districts	17.12.2015	Parkstad - Ministry of Internal Affairs (including Built Environment)	Netherlands
Session of local council	20.01.2016	Nieder-Beerbach - on-site presentation	Germany
Optimization of energy planning strategies in municipalities: Are community energy profiles the key to a higher implementation rate of renewable energies	10.03.2016	Hamburg - SBE'16 conference as invited speaker	Worldwide
Optimization of energy planning strategies in municipalities: Are community energy profiles the key to a higher implementation rate of renewable energies	11.03.2016	Hamburg - SBE'16 conference PhD workshop	Worldwide
The Linkage of Urban and Energy Planning for Sustainable Cities: The Case of Denmark and Germany	15.04.2016	Lisbon - 18 th International Conference on Environmental Engineering and Urban Area	Worldwide
Information event during barbecue party of the local fire department in the district	05.05.2016	Nieder-Beerbach - on-site event	Germany
Chancen und Herausforderungen beim Zusammenspiel von Energie- und Stadtplanung im internationalen Kontext	10.05.2016	Biel - Energiestadt Mitgliederversammlung	Switzerland
Local context in energy planning: Optimization of municipal energy strategies through merging of quantitative and qualitative data	13.05.2016	Lyngby-Taarbæk Kommune - EER Seminar in Copenhagen	Denmark
Implementation of energy strategies in communities	30.05.2016	Presqu'île de Giens – ECEEE 2017	Worldwide
Implementation of energy strategies in communities	08.06.2016	Oslo - ExCo Technical day	Worldwide
Implementation of energy strategies in communities	28.06.2016	Wuhan - EU-China Low Carbon Cities Conference	China
Session of local council	02.11.2016	Nieder-Beerbach - on-site presentation	Germany
Poster display	03.11.2016	Zürich - intep open house event	Switzerland

Description / Title	Date	Venue / event	Target Group
Poster display	03.11.2016	Mühlthal - Round table with energy consultants from Mühlthal and the surrounding area	Germany
Poster display	16.11.2016	Aachen - Round table with a group of so-called "energieeffizienzPlaner" (energy efficiency planners)	Germany
Poster display	17.11.2016	Aachen - Round Table with a group of so-called "energieeffizienzFachbetriebe" (enterprises specialised in energy efficiency)	Germany
Poster display	24.11.2016	Interlaken - regio suisse science forum 2016	Switzerland
Presentation about "Successful Implementation of Energy Strategies in Local Communities through Strategic Navigation between Professions"	30.11.2016	Lyngby - Sustain DTU 2016 Conference	Denmark
Poster display	06.12.2016	Ludwigsburg - Round Table with energy consultants from Ludwigsburg and the surrounding area	Germany
Presentation about the role in the Energy Transition process	12.12.2016	Maastricht – State Government of Limburg	Netherlands
Poster display	30.01.2017	Berlin - "ENERGIEWENDEBAUEN 2017"	Germany
Urban issues coordination group	22.02.2017	Paris - IEA Building Co-ordination Group Meeting	Worldwide

4.2.2. Print media

Print media, including articles in journals or brief summary documents were used to disseminate the results on a local level. In total, 13 articles were published in print media.

The data on completed dissemination activities via print media are listed in Table 8.

Table 8: Carried out dissemination activities via print media

Description / Title	Date	Title of journal	Target Group
Review Committee	27.02.2015	Telecon Group	Canada
Dissemination of flyers during kick-off meeting	23.10.2015	Ludwigsburg	Germany
Dissemination during kick-off meeting in Mühlthal	26.10.2015	Flyer	Germany
Dissemination during kick-off meeting in Aachen	04.11.2015	Flyer	Germany
Magazin of the German Association of Housing, Urban and Spatial Development	06.04.2016	DV Aktuell 1/2016	Germany
Reporting on the event on 05.05.2016	25.05.2016	Mühlthalpost	Germany
Announcing information event for citizens with the local council of Nieder-Beerbach	26.10.2016	Mühlthalpost	Germany
Announcing information event for citizens with the local council of Nieder-Beerbach	28.10.2016	Kurier	Germany
Announcing information event for citizens with the local council of Nieder-Beerbach	02.11.2016	Darmstädter Echo	Germany
Describing the presentation of intermediate project results at the local council of Nieder-Beerbach	08.11.2016	Darmstädter Echo	Germany
Document Review	04.12.2016	Internal	Canada
Stadtplanung mit Energie: Methoden zur Umsetzung von Energiestrategien in Städten und Gemeinden	03.02.2017	Nachhaltige Technologien	Austria

4.2.3. Online media

Online media, as example newsletters, webpages, online articles and reports were used to disseminate the results on an international level. In total, 11 articles were published in online media.

The corner data of the carried out dissemination activities via online media are listed in Table 9.

Table 9: Carried out dissemination activities via online media

Description / Title	Date	Link
IEA-EBC Annual Report 2014	07.12.2014	Download
IEA-EBC Newsletter 2015	26.01.2015	Download
Webpage of the 3%-Project	01.09.2015	www.deutscher-verband.org
Webpage Annex 63	31.12.2015	www.annex63.org
IEA-EBC Annual Report 2015	20.01.2016	Download
IEA-EBC Annex 63 Factsheet	07.04.2016	Download
IEA-EBC Newsletter 2016	12.07.2016	Download
PI-SEC Project Report: Planning Instruments for Smart Energy Communities	01.10.2016	Download
PI-SEC Project Report: Analysis of goals and KPIs in design projects	01.10.2016	Download
Online article about the 3%-Project published by the BINE information service	14.12.2016	www.bine.info
Online article about the 3%-Project published on Eneff:Stadt website	15.12.2016	www.eneff-stadt.info

4.2.4. Papers

Papers are a special format of online media. They address an international and specialised expert group. In some cases, the papers were also presented at international conferences (see also chapter 4.2.1). In total, 10 papers were elaborated.

The corner data of the published papers within the framework of Annex 63 are listed in Table 10.

Table 10: Elaborated papers within the framework of Annex 63

Description / Title	Date	Conference / journal
Implementation of Energy Strategies in Communities – from Pilot Project in Salzburg, Austria to Urban Strategy <i>Author: Strasser H.</i>	01.01.2015	2015 ASHRAE Winter Conference in Chicago
Successful Local Energy Planning through Interdisciplinarity' as a contribution to a possible upcoming publication at Routledge <i>Authors: Cajot S., Petersen J.P.</i>	01.02.2016	Interdisciplinarity and Climate Change - Routledge book chapter or special issues journal article
The Linkage of Urban and Energy Planning for Sustainable Cities: The Case of Denmark and Germany <i>Authors: Petersen J.P.</i>	15.04.2016	18th International Conference on Environmental Engineering and Urban Area in Lisbon
Conceptualizing transformational change in energy systems and the built environment <i>Authors: Quitzau M.B., Petersen J.P</i>	01.09.2016	4S/EASST Conference in Barcelona 2016
Successful Implementation of Energy Strategies in Local Communities through Strategic Navigation between Professions <i>Authors: Quitzau M.B., Petersen J.P.</i>	30.11.2016	Sustain DTU 2016 Conference
Implementation of Energy Strategies in Communities - Results within the context of IEA Annex 63 (accepted) <i>Authors: Schiefelbein J., Slotterback C., Petersen J.P., Koch A., Strasser H., Mair am Tinkhof O., Kimman J., Church K., Freudenberg J.</i>	27.01.2017	ECOS conference 2017
Implementation of Energy Strategies in City of Salzburg, Austria - From Pilot Project to Urban Strategy (accepted) <i>Authors: Strasser H., Rehbogen A., Huemer F.</i>	27.01.2017	ECOS conference 2017
Implementation of Energy Strategies in Communities (accepted) <i>Authors: Strasser H., Church K., Freudenberg J., Koch A., Sevenet M., Mair am Tinkhof O., Schiefelbein J., Slotterback C.</i>	13.03.2017	ECEEE Summer Study 2017
Article in the conference proceedings <i>Authors: Freudenberg J., Lynar U.</i>	30.01.2017	ENERGIEWENDEBAUEN 2017 Conference
Implementation of energy strategies in communities (in review) <i>Authors: Strasser H., Kimann J., Koch A., Mair am Tinkhof O., Müller D., Schiefelbein J., Slotterback C.</i>	31.03.2017	Energy and Buildings - Journal – Elsevier

5. Lessons Learned

Each city is unique and has its own processes, measures and frameworks to implement optimised energy strategies. The aim of Annex 63 was to collect this specific knowledge (step 1), develop it further in an international context (step 2) and bring the knowledge back to the cities (step 3; see also chapter 2). The participating cities and stakeholder were supported via the project with new ideas to optimize their approach to urban and energy planning.

LESSONS LEARNED FROM THE DATA COLLECTION (STEP 1)

For the collection of specific knowledge on-site, 86 national meetings were carried out. The lessons learned via this process are as follows:

Within many cities, there was not one central contact person for all of our questions related to urban and energy planning issues. Urban planning is in many cities a task of the local urban planners. On the other hand energy planning is in many cases a task of other divisions or the local energy supplier. Today, not all cities take an active role in (urban) energy planning. Neither the planning culture nor the size of the city made a difference in this context. Therefore, the establishment and activation of an interdisciplinary network was one success factor that was essential in getting all of the relevant information for the necessary analyses within the framework of Annex 63.

LESSONS LEARNED FROM THE DATA ANALYSIS (STEP 2)

To share the collected information and develop the knowledge further, four internal workshops among the project partners were carried out. The lessons learned from this process are as follows:

The internal information exchange activities within the project partners of Annex 63 showed that the terminology, or wording, is a critical element in (international) information exchanges. Wording means in this sense, to have a common understanding about key words, such as integrated urban and energy planning. As the existing processes, instruments and frameworks are different in each country, experts from the same disciplines should take care when they talk to each other. To make the right conclusions, the experts should confirm whether they have a common understanding and are accurately reflecting the country specific frameworks. Conversations will become even more complicated, if experts from different countries and disciplines talk to each other as the potential for disconnect and confusion may be even greater. Therefore, discussions between two different divisions / experts must be based on a common “language” to lead to a common understanding. Within the framework of Annex 63, opportunities for discussion and questioning, including through internal workshops, were identified as an element to overcome these barriers.

LESSONS LEARNED FROM THE DATA VALIDATION (STEP 3)

Finally, the intermediate results were presented in 6 international and 47 national workshops. The lessons learned out of this process are as follows:

The completed information exchange activities with international experts and cities – that were not involved directly into the project – showed that the creation of a common understanding was the most difficult part. Often, experts came to workshops with their own understanding, specific questions, and in some cases a lack of interests in the range of topics that was being addressed. For example, many cities had a master plan and were therefore not interested in talking about target setting. Therefore, the workshop format was tailored to offer opportunities to discuss several topics in parallel, engaging those who were interested in each. It was also very useful for many stakeholders, to discuss specific information in small groups, to allow for greater dialogue and clarification of terminology.

The carried out information exchange activities with national experts and cities – that were involved directly into the project – showed also, that not all cities were interested in all topics that we have offered. One reason was that each city has working planning processes and measures and thus at present, not all topics are relevant or a priority for the city (see also chapter 6). While guidelines were discussed as a possible product to develop for cities, it became clear that guidelines were problematic as static instruments that are not effective in accounting for local conditions. Therefore, cities were receptive to the focus of Annex 63 on offering a neutral “communication platform” for discussion of a variety of topics. In contrast to a guideline, a communication platform is flexible and helps to identify the right questions to make the right decisions. It is not necessary to give prefabricated answers, as the context is important to determining whether an approach is right for a specific place. Thus, a key benefit of interaction with Annex 63 for the participating cities was to stay in contact with independent experts that have relevant expertise and skills to organize a productive workshop. Experts were effective when they knew who should be in the workshop, what the possible topics for the discussions were and what workshop formats are suitable to get a positive outcome for both, the participants and the organizer.

LESSONS LEARNED SUMMARY

Based on all carried out information exchange activities within the framework of Annex 63 the following success features for the implementation of optimized information exchanges within cities were identified:

- **Create a common understanding:** Integrated urban and energy planning is an interdisciplinary topic. Therefore, it must be elaborated with at least two different expert groups (urban planners and energy planners). But each expert group has its own specific language, terms and boundary conditions. Therefore it is of great importance to create a common understanding and to explore interest relative to the topic. Within the framework of Annex 63, informational slides for presentations were elaborated to support this process. These slides contain facts, figure and a

collection of topics that can be used to create this common understanding. More information is available in the following Annex 63 report: Volume 4: Stakeholder support materials.

- **Choose the optimal discussion format:** Successful meetings need a good preparation. In addition the selection of the topic, the planned discussion format is of great importance. Tailoring the format to the types of stakeholders to be engaged is also important. Therefore, an overview about different workshop formats was elaborated within the framework of Annex 63. The overview can be used to identify and implement successful discussion rounds. More information is available in the following Annex 63 report: Volume 4: Stakeholder support materials.
- **Implement a long-term format:** The completed information exchange activities have shown that interdisciplinary workshop formats were “*very fruitful*” in all cities. It was helpful for participants to meet others representing a range of departments, cities and countries and to hear that other cities have similar problems. Thus, the establishment of the (temporary) project specific communication platform was, for many cities, a highlight of Annex 63. To continue or to establish such a communication platform, resources and responsibilities must be determined within the relevant stakeholders. Within the framework of Annex 63, an overview to the topic “capacity building and skills” was elaborated. The overview can be used to identify the necessary steps to establish a national network of people that work on interdisciplinary topics. More information is available in the following Annex 63 report: Volume 4: Stakeholder support materials.

6. Outlook: Ongoing information exchange activities

As listed in Table 11 all participating cities worked within Annex 63 on average on six strategic measures.

Table 11: Focus topic of each participating city within the framework of Annex 63

Country	Supporting communities	Set Vision and Targets	Develop Renewable Energy Strategies	Make Full Use of Legal Frameworks	Design of Urban Competition Processes	Make Use of Tools Supporting the Decision Making Process	Implement Monitoring of Energy Consumption and GHG Emissions	Stakeholder Engagement & Involvement	Include Socio Economic Criteria	Implement Effective and Efficient Organizational Processes
Austria	Salzburg			x	x	x		x		x
	Vienna			x		x		x		x
Canada	Burlington	x	x						x	x
	Guelph	x	x						x	x
	London (Ontario)	x	x						x	x
	Toronto	x	x						x	x
Denmark	Egedal		x	x		x	x	x	x	x
	Middelfart		x	x		x	x	x	x	x
	Roskilde		x	x		x	x	x	x	x
	Skive		x	x		x	x	x	x	x
France	Lille	x					x	x		x
	Strasbourg	x	x				x	x		x
Germany	Aachen	x	x	x	x	x	x	x	x	x
	Ludwigsburg	x	x	x	x	x	x	x	x	x
	Karlsruhe				x		x		x	
Japan	Kitakyushu	x	x		x		x	x	x	x
	Yokohama	x	x	x	x	x	x	x	x	x
Netherlands	Maastricht	x	x	x	x	x	x	x	x	x
Norway	Oslo			x				x		
	Bergen			x				x		
Switzerland	Basel			x	x	x			x	
USA	Minneapolis	x	x	x		x	x	x	x	x

In many cases, the carried out information exchange activities led to new cooperation and national project ideas in the context of urban and energy planning.

The following overview shows ongoing national initiatives within the framework of Annex 63:

- Austria:
 - Input to regional regulations in the field of urban planning based on international examples (strategic measure: Make Full Use of Legal Frameworks)
 - Development of an Austrian system for the evaluation of settlements based on the Swiss concept of the 2000-Watt-Site (strategic measure: Design of Urban Competition Processes)
 - Development of a heat map for (urban) energy planning based on international examples (strategic measure: Make Use of Tools Supporting the Decision Making Process)
 - Establishment of a national network that work on the topic “urban and energy planning in Salzburg, Vienna, Graz, Innsbruck and Villach” based on international examples (strategic measure: Implement Effective and Efficient Organizational Processes)
- Canada/USA:
 - Cooperation between Natural Resources Canada and the University of Minnesota – [Renewable Cities Global Learning Forum 2017](#)
- France:
 - The outcomes of Annex 63 will be presented to Métropole de Lille and ADEUS.
 - In any case, ADEUS are interested to use outcomes particularly about “*Set Vision and Targets, Develop Renewable Energy Strategies and Implement Monitoring of Energy Consumption and GHG Emissions*”.
 - In collaboration with ADEUS, Eifer answered a call for ADEME funding about energy planning in urban planning at local level to applied recommendation did in Annex63.
- Germany:
 - Establishment of a temporary information exchange platform between Germany, Austria and Switzerland to discuss urban and energy planning topics (strategic measure: Implement Effective and Efficient Organizational Processes) – [DACH-Projekt](#)
 - Development of communal refurbishment strategies bases on international examples (strategic measure: all identified measures) – [Drei-Prozent-Projekt](#)
- Japan:
 - Additional information exchange activities to establish the European Energy Award in Japan (strategic measure: Implement Monitoring of Energy Consumption and GHG Emissions)
 - Information exchange activities with the Japanese District Heating and Cooling Association (www.dhcjp.or.jp)

- Netherlands:
 - Additional information exchange activities to establish the European Energy Award in the Netherlands (strategic measure: Implement Monitoring of Energy Consumption and GHG Emissions)
- Norway:
 - Continue working on “Planning Instruments for Smart Energy Communities” (strategic measure: Make Full Use of Legal Frameworks and Stakeholder Engagement & Involvement) – [PI-SEC Project](#)
 - There are several ongoing projects internationally, focussing on Energy Strategies in Communities. An example of research programmes is the Norwegian Research Centre on Zero Emission Neighbourhoods in Smart Cities (ZEN). The ZEN-centre lasts for 8 years, from 2017, and builds upon experiences from the Zero Emission Buildings Centre ([zeb.no](#)). ZEN has 10 public partners and 21 industry partners, beside the research partners NTNU and SINTEF. The main objective of ZEN is to develop knowledge, competitive products and solutions that will lead to realization of sustainable neighbourhoods that have zero emissions of greenhouse gases related to their production, operation and transformation. There are seven pilot areas in the centre, demonstrating different aspects of Zero Emission Neighbourhoods. The two Norwegian case-studies in Annex 63 (Furuset/Oslo and Bergen) are part of ZEN and international experiences from Annex 63 will be distributed also to the other pilot areas.

The results of each project will be available in individual national reports.

7. References

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Appendix A – Carried out national information exchange activities

A-1. Carried out national meetings

* Number of Participants

Country	Description / Title	Date	Venue	P.*
Japan	Project Meeting	28.08.2014	Tokyo	12
Austria	Working group Smart City Salzburg DACH	11.11.2014	Salzburg	6
Austria	Working group Smart City Salzburg Itzling	27.11.2014	Salzburg	5
Japan	Project Meeting	19.12.2014	Tokyo	13
Japan	Project Meeting	14.04.2015	Tokyo	15
Austria	Working group Smart City Salzburg	26.06.2015	Salzburg	7
Austria	Working group Smart City Salzburg	12.09.2015	Salzburg	7
Japan	Project Meeting	14.09.2015	Tokyo	14
Germany	Kick-off meeting for taking inventory with representatives of municipal administration, specifically departments for sustainable urban development and urban planning	23.10.2015	Ludwigsburg	7
Germany	Kick-off meeting for taking inventory with local representatives (mayor, department for economic development, building authority)	26.10.2015	Mühlital	6
Austria	Working group Smart City Salzburg	28.10.2015	Salzburg	5
Germany	Kick-off meeting for taking inventory with local representatives (administration of district Aachen Brand and information service on energetic renovation "altbau plus")	04.11.2015	Aachen	7
Austria	Working group Smart City Salzburg	20.11.2015	Salzburg	7
Denmark	Discussion with the municipality Lyngby-Taarbæk about the possibility to implement knowledge from A63 into one of their ongoing projects so they could become one of our pilot projects. Responsible for contact: Jens-Phillip Petersen	01.12.2015	Lyngby-Taarbæk	5
Germany	Information meeting on planned activities in the chosen model district Aachen-Brand, giving information to the members of the district administration	02.12.2015	Aachen	8
Austria	Working group Smart City Salzburg	17.12.2015	Salzburg	7
Austria	1 st Coordination meeting with Land Salzburg	17.12.2015	Salzburg	7
Japan	Project Meeting	15.01.2016	Tokyo	14

Country	Description / Title	Date	Venue	P.*
Germany	Interview with representatives of construction supervision and business development of county Darmstadt-Dieburg	19.01.2016	Darmstadt	5
Germany	Interview with environmental advisor in the office of the district councillor of the county Darmstadt-Dieburg	19.01.2016	Darmstadt	5
Germany	Tour of the chosen model district Nieder-Beerbach	20.01.2016	Mühlital	6
Germany	Interview with Effizienz:Klasse GmbH (consulting service on energy efficient building and renovation) and regional energy service provider e-netz Südhessen GmbH & Co. KG	20.01.2016	Mühlital	8
Germany	Interview with local administration Mühlital	20.01.2016	Mühlital	7
Germany	Information meeting on planned activities in the chosen model district Nieder-Beerbach, giving information to the members of the local council	20.01.2016	Mühlital	8
Austria	2 nd Coordination meeting with Land Salzburg	02.02.2016	Salzburg	6
Germany	Interview with home and property owners association of Aachen	17.02.2016	Aachen	6
Germany	Interview with information center for Aachen of the consumer advice centre for North-Rhine Westphalia (Verbraucherzentrale NRW)	17.02.2016	Aachen	6
Germany	Interview with the tenant protection association for Aachen and the surrounding region	17.02.2016	Aachen	6
Germany	Interview with altbau plus e.V. (association for energy efficiency consulting)	17.02.2016	Aachen	5
Austria	Working group Smart City Salzburg Projects with Salzburg AG	18.02.2016	Salzburg	9
Germany	effeff ac - regio-energiegemeinschaft e.V. (energy consulting service)	18.02.2016	Aachen	6
Germany	Interview with gewoge AG Aachen (largest housing association in the city of Aachen)	18.02.2016	Aachen	7
Germany	Interview with STAWAG Stadtwerke Aachen AG (municipal utilities)	18.02.2016	Aachen	5
Austria	Working group Smart City Salzburg Stakeholder management	01.03.2016	Salzburg	4
Germany	Interview with Stadtwerke Ludwigsburg-Kornwestheim GmbH (municipal utilities)	15.03.2016	Ludwigsburg	6

Country	Description / Title	Date	Venue	P.*
Germany	Interview with Bürgerbüro Bauen Ludwigsburg (citizen's office for building)	15.03.2016	Ludwigsburg	5
Germany	Interview with Haus und Grund Ludwigsburg e.V. (Home and property association)	16.03.2016	Ludwigsburg	4
Germany	Interview with Ludwigsburger Energieagentur LEA e.V. (local energy agency)	16.03.2016	Ludwigsburg	6
Germany	Interview with Wohnbau Ludwigsburg (housing company)	16.03.2016	Ludwigsburg	4
Japan	Project Meeting	29.03.2016	Tokyo	13
Austria	Working group Smart City Salzburg Communication	14.04.2016	Salzburg	5
Austria	3 rd Coordination meeting with Land Salzburg	02.05.2016	Salzburg	8
Austria	Working group Smart City Salzburg Various topics	02.05.2016	Salzburg	5
Germany	Interview with Nieder-Ramstädter Diakonie (deaconry of district Nieder-Ramstadt - housing owner)	03.05.2016	Mühlital	7
Germany	Interview with county administration	04.05.2016	Darmstadt	7
Germany	Interview with bauverein AG (real estate company)	04.05.2016	Darmstadt	7
Germany	Interview with Nassauische Heimstätte (housing association)	04.05.2016	Darmstadt	6
Germany	Interview with Mieterbund Darmstadt Region Südhessen e.V. (tenants' association Darmstadt for the region South Hesse)	04.05.2016	Darmstadt	6
Austria	Working group Smart City Salzburg Various topics	17.05.2016	Salzburg	5
Austria	Information exchange with IEA EBC Annex 64 LowEx Communities	24.05.2016	Online	2
Canada	Advice and feedback from advisory group of planners from candidate cities (ongoing)	01.06.2016	Online	6
Germany	Interview with Kreishandwerkerschaft Aachen (District Craft Trades Association)	14.06.2016	Aachen	4
Germany	Interview with Bund Deutscher Baumeister, Bezirksgruppe Aachen (Association of German Master Builders, district group Aachen)	15.06.2016	Aachen	4
Germany	Interview with STAWAG Stadtwerke Aachen AG (municipal utilities)	15.06.2016	Aachen	5
Germany	Interview with Fachbereich Immobilienmanagement (real estate department) of the city of Aachen	15.06.2016	Aachen	5

Country	Description / Title	Date	Venue	P.*
Germany	Interview with Sparkassen Immobilien GmbH Region Aachen (savings bank real estate company)	16.06.2016	Aachen	5
Germany	Interview with Ministerium für Umwelt, Klima und Energiewirtschaft (Ministry of the environment, climate protection and the energy sector Baden-Wuerttemberg)	28.06.2016	Ludwigsburg	7
Germany	Interview with Ackermann Gemeinde Wohnungsbaugesellschaft (housing association in Ludwigsburg, partially owned by the Catholic church)	28.06.2016	Ludwigsburg	6
Germany	Interview with Energetikom – Energiekompetenz und Ökodesign e. V. (registered association for energy competence and 29co-design)	29.06.2016	Ludwigsburg	6
Japan	Project Meeting	30.06.2016	Tokyo	11
Germany	Interview with Kreishandwerkermeister Albrecht Lang (master craftsman of the district guild)	30.06.2016	Ludwigsburg	6
Germany	Interview with Wohnungsbau Ludwigsburg GmbH (municipal housing company)	30.06.2016	Ludwigsburg	6
Austria	Working group Smart City Salzburg Mobility	07.07.2016	Salzburg	4
Austria	Working group Smart City Salzburg projects: heatswap, e5	12.09.2016	Salzburg	4
Austria	Working group Smart City Salzburg International	13.10.2016	Salzburg	4
Germany	Interview with Volksbank Modau eG (credit union)	02.11.2016	Mühlthal	8
Germany	Presentation of intermediate project results in the session of the local council of Nieder-Beerbach	02.11.2016	Mühlthal	15
Germany	Interview with Verbraucherzentrale Hessen e.V (Hessian consumer association)	03.11.2016	Darmstadt	8
Germany	Interview with Sparkasse Darmstadt (savings bank of Darmstadt)	03.11.2016	Darmstadt	6
Germany	Interview with Haus & Grund Dieburg e.V. (home and property association)	03.11.2016	Mühlthal	6
Japan	Project Meeting	15.11.2016	Tokyo	11
Germany	Interview with Sparkasse Aachen (savings bank of Aachen)	16.11.2016	Aachen	5
Germany	Interview with EWV Energie- und Wasser-Versorgung GmbH (energy and water supply	16.11.2016	Aachen	4

Country	Description / Title	Date	Venue	P.*
	company in the city of Aachen and surrounding region)			
Germany	Interview with a small investor	17.11.2016	Aachen	5
Austria	EnergyCityConcepts – Project meeting	28.11.2016	Graz	8
Netherlands	Urban Energy in The Hague (Ministry of Economic Affairs), Dutch Visitors Programme on Sustainable Energy in an Urban Environment	29.11.2016	The Hague	10
Germany	Interview with Verein der Östlichen Stadt Ludwigsburg e. V. and Förderverein der Schloßlesfeldbibliothek e.V. (civic association for the Eastern part of Ludwigsburg and association for the support of the Schloßlesfeld library)	06.12.2016	Ludwigsburg	7
Germany	Interview with the association Deutscher Mieterbund für Stadt und Kreis Ludwigsburg e.V. (Tenants' association for city and district Ludwigsburg)	06.12.2016	Ludwigsburg	5
Germany	Interview with Stadtwerke Ludwigsburg (municipal utilities)	07.12.2016	Ludwigsburg	6
Germany	Interview with the municipal administration of Ludwigsburg	07.12.2016	Ludwigsburg	6
Germany	Interview with Wüstenrot Haus- und Städtebau GmbH (housing company)	07.12.2016	Ludwigsburg	5
Germany	Interview with the district administration of Ludwigsburg	07.12.2016	Ludwigsburg	4
Canada	Feedback from Karen Farbridge & ASSOCIATES	22.12.2016	Online	2
Austria	Working group Smart City Salzburg ROG	19.01.2017	Salzburg	4
Austria	EnergyCityConcepts – Meeting with regional planner of Gleisdorf	26.01.2017	Graz	6
Japan	Project Meeting	08.03.2017	Tokyo	12

The outcomes were integrated directly in the development process and are documented in the specific reports of Annex 63.

A-2. Carried out national workshops

* Number of Participants

Country	Description/Title	Date	Venue	P.*
Austria	Visit of Tokyo Gas	05.11.2014	Salzburg	5
Austria	„City of the future“ - Programme strategy	26.11.2014	Wien	10
Austria	Smart Cities – What is a smart city	28.11.2014	Zürich	100
Austria	Smart City Week Salzburg	04.03.2015	Salzburg	100
Austria	IEA SHC Task 51: Research and cities	06.03.2015	Salzburg	30
Austria	Project workshop: ERPhoch3	26.03.2015	Graz	20
Austria	Working group workshop: Zell am See; Sonnengarten Limberg	16.06.2015	Zell am See	11
Japan	Project Workshop	25.06.2015	Kitakyushu	8
Japan	Project Workshop	02.07.2015	Yokohama	7
Japan	Project Workshop	17.08.2015	Kitakyushu	8
Japan	Project Workshop	27.08.2015	Yokohama	5
Austria	Workshop within the framework the study trip to Amsterdam, Bottrop und Hamburg	31.08.2015	Amsterdam	24
Austria	IEA SHC Task 51: In-take Workshop: Solar energy in urban planning	05.11.2015	Graz	15
Austria	Growth in change	23.02.2016	Wien	30
Germany	Working group "AG Energie" of the German Association for Housing, Urban and Spatial Development	14.03.2016	Berlin	30
Germany	Participation on Energy Days Berlin, Workshop "Succesfull energy efficient refurbishments with the new instrument: individual housing building refurbishment plan"	13.04.2016	Berlin	50
Austria	Workshop im Rahmen der Fachexkursion nach Kopenhagen und Hamburg	18.04.2016	Kopenhagen	24
Germany	Participation in EU-GUGLE conference (EU project on energy efficient renovation)	21.04.2016	Aachen	50
Germany	Working group "AG Energie" of the German Association for Housing, Urban and Spatial Development	25.04.2016	Berlin	30
Austria	Final Workshop 2000 Watt Site	28.04.2016	Wien	8
Austria	EnergyCityConcepts – 1 st meeting	22.06.2016	Salzburg	7
Austria	1 st Smart City Round Table	01.07.2016	Salzburg	43
Japan	Project Workshop	02.08.2016	Kitakyushu	5
Austria	klimaaktiv development laboratory	13.09.2016	Wien	33
Austria	1 st information exchange with the project partners of the "Urban Learning" project	29.09.2016	Wien	9

Country	Description/Title	Date	Venue	P.*
Netherlands	Presentation European Energy Award in Utrecht	04.10.2016	Utrecht	10
Austria	2 nd information exchange with the project partners of the "Urban Learning" project	19.10.2016	München	30
Austria	IEA Network meeting	20.10.2016	Wien	30
Germany	Round table with energy consultants from Mühlthal and the surrounding area	03.11.2016	Mühlthal	15
Germany	4th trinational exchange workshop in the framework of DACH-Project "Energy efficient city"	08.11.2016	Karlsruhe	22
Austria	EnergyCityConcepts – 2 nd meeting	16.11.2016	Salzburg	11
Germany	Round table with a group of so-called "energieeffizienzPlaner" (energy efficiency planners)	16.11.2016	Aachen	8
Germany	Round table with a group of so-called "energieeffizienzFachbetriebe" (enterprises specialised in energy efficiency)	17.11.2016	Aachen	8
Switzerland	Cluster Presentation to the City of Basel	22.11.2016	Basel	7
Denmark	National workshop on added value through local energy strategies in Danish (title: "Merværdi i energistrategier i lokale byområder"). Half-day workshop together with municipalities, investors, engineers and urban planning experts	24.11.2016	Copenhagen	25
Germany	Round table with energy consultants from Ludwigsburg and the surrounding area	06.12.2016	Ludwigsburg	10
Norway	Legislation for urban and energy planning in Oslo	07.12.2016	Oslo	5
France	Feedback of ADEUS upon the presentation of Annex 63 and of the clusters	13.12.2016	Strasbourg	15
Netherlands	Large scale implementation of energy renovation	14.10.2016	Amersfoort	35
Netherlands	Heat symposium	15.12.2016	Maastricht	35
Netherlands	Stainable urban development in Lauradorp	23.01.2017	Landgraaf	25
Germany	Participation in Workshop and network meeting for district managers supported by the KfW funding programme 432 "Energetische Stadtsanierung" (energy efficient city refurbishment)	25.01.2017	Pforzheim	50
Germany	Participation in "ENERGIEWENDEBAUEN 2017" (conference on the energy transition in the building sector)	30.01.2017	Berlin	400

Country	Description/Title	Date	Venue	P.*
Austria	Workshop Itz Smart	01.02.2017	Salzburg	19
Austria	Round table "BauZ 2017"	16.02.2017	Wien	40
Denmark	Internal workshop with the municipality of Lyngby-Taarbæk	11.04.2017	Lyngby-Taarbæk	5
Japan	Presentation European Energy Award in Tokyo	24.04.2017	Tokyo	37
Austria	3 rd information exchange with the project partners of the "Urban Learning" project	03.05.2017	Vienna	14

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