SET Plan – Declaration of Intent
on Strategic Targets in the context of an
Initiative for Smart Cities and Communities

Purpose of this document

This document[1] is intended to record the agreement reached between representatives of the European Commission services, representatives of the EU Member States, Iceland, Norway, Turkey and Switzerland, and representatives from the SET-Plan stakeholders most directly involved in Smart Cities and Communities activities, on the implementation of the actions contained in the SET-Plan Communication[2], and specifically the strategic targets for the priority "Number 3 – Create technologies and services for smart homes that provide smart solutions to energy consumers" for what concerns smart cities and communities.

This agreement follows consultations with the European Innovation Partnership on Smart Cities and Communities, the Covenant of Mayors, the EERA Joint Programme on Smart Cities, the Joint Programming Initiative Urban Europe, the EU Smart Cities Information System, the ERA-NET on Smart Cities and Communities, the Citykeys Support Action, as well as a public consultation via the SETIS website[3] on an issues paper prepared by the Commission services[4]. It takes into consideration the responding input papers and public comments available on SETIS and discussions in the SET-Plan Steering Group on 20 January 2016 with the participation of the SET-Plan stakeholders most directly involved in the topic.

The stakeholders agree to the proposed approach and targets in an endeavor to develop tools and solutions to create more linkages between buildings, better integrating energy, ICT and transport in districts and urban planning tools at city level.

Brussels, 19 October 2016

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[1] This document has no legally binding character, and does not prejudge the process or final form of any future decisions by the European Commission.

[2] Towards an Integrated Strategic Energy Technology (SET) Plan: Accelerating the European Energy System Transformation" (C(2015)6317).

[3] Strategic Energy Technology Information System website https://setis.ec.europa.eu/

[4] https://setis.ec.europa.eu/system/files/issues_paper-action3_smartcities.pdf

Introduction – Smart Cities and Communities

Cities and urban communities have a crucial role to play in the implementation of the energy policy for 2020 and 2030. About 3/4 of the population in Europe lives in and around urban areas, consuming 70% of the EU energy and emitting about the same share of greenhouse gases with a rising trend. Mobility in cities is at the same time an imperative need and an issue, transport being also a source of congestion, greenhouse gas emissions and pollutants / particles which can be harmful to the health of citizens for vehicles relying on the combustion of hydrocarbon fuels.

Quality of life and the attractiveness of cities as environments for learning, innovation, doing business and job creation are now key parameters for success in the global competition for talent, growth and investments. On this basis, the Commission established the European Innovation Partnership on Smart Cities and Communities (COM(2012) 4701 final). Smart Cities and Communities solutions aim at bringing together local authorities, industry, research centers, universities and citizens to accelerate the market rollout of sustainable innovative solutions integrating energy, ICT and transport.

In the global smart city market, which is evaluated to be around €1.3 trillion in 2020, one of the key challenges is to provide solutions that significantly increase cities' overall energy and resource efficiency through actions addressing the building stock, energy systems and mobility.

Urban spaces should use secure, affordable and clean energy, smart transport services, low and emission free vehicles and smart tools and services. Showcasing the economic viability of these solutions will help to create new markets and new jobs. Therefore, it is important to bring together cities, industry and citizens to demonstrate solutions and business models that can be scaled up and replicated, and that lead to measurable benefits in energy, resource efficiency and on the environment.

In the frame of the SET-Plan, the Smart Cities and Communities initiative is not specifically aiming at one technology but is integrating many technologies and issues. There is therefore a number of links with other actions of the SET-Plan. The scope of this Smart Cities and Communities declaration of intent will therefore be on aspects related to the integration of technologies encompassing energy, ICT and transport dimensions and their benefits when applied to buildings at district and city levels.

Individual buildings are addressed under Action 5 'Develop new materials and technologies for energy efficiency solutions for buildings' which targets, among others the development of ambitious, cost-effective and all-inclusive refurbishment packages that are less disruptive for occupants, more reliable in their performance, and the decrease of construction and maintenance costs of new Nearly Zero Energy Buildings. Smart solutions for energy prosumers and consumers, i.e. demand-response and smart appliances for homes are the subject of Action 3.1). Actions 3.1), 5) and 3.2) could therefore be seen as logical sequence spanning through individual households, buildings, districts and cities.

The broader energy system with the electricity system at the center is the subject of Action 4) while the production from renewable energies is the Topic of Action 1). Sustainable transport is addressed under Action 7) and 8).

The target under the present Action 3.2 - Smart Cities and Communities – aims at *net–zero-energy/emission districts (ZEED) that will strongly contribute to COP21 targets.* These districts consist of buildings (new, retro-fitted and historic – including offices, residential, commercial, schools, universities, hospitals, etc.) that actively manage the energy flow between them and the larger energy and mobility system. They make optimal use of advanced materials, local RES, local storage, demand-response, electrical vehicle smart

charging, cutting edge energy management (electricity, heating and cooling), user interaction and ICT in order to have a net–zero-energy/emission balance throughout their entire lifetime and a positive impact on the energy system.

Positive Energy Blocks of various sizes can be used as innovation-pushing "seeding points" for these districts to showcase in highly concentrated form the integration of all the aspects that are needed for net–zero-energy/emission districts. Their concept is intrinsically up-scalable and they are well embedded in the spatial, economic, technical, environmental, cultural and social context. They are by design an integral part of the district/city energy and mobility system.

Target

→ Be global role model/market leader in technology integration for and deployment of **net–zero-energy/emission districts (ZEED)** with the aim **by 2025** to have at least **100 successful examples** synergistically-connected to the energy system in Europe and a strong export of related technologies.

Elements to reach the targets and for their monitoring

R&I initiatives such as the Smart Cities and Communities environment funded through the Horizon 2020 programme (lighthouse projects, information systems on Smart Cities, ongoing support actions) can provide data and indicators to help monitoring the progress.

The environment of the European Innovation Partnership (EIP) on Smart Cities and Communities and the Covenant of Mayors is the appropriate framework for action and synergies can be established, in particular in the context of the development of Sustainable Energy Action Plans (SEAPs) for cities.

This initiative could also be the occasion to tighten links between the policy initiatives (Covenant of Mayors, EIP on Smart Cities and Communities) and demonstration carried out in the frame of Horizon 2020 (Lighthouse projects). In particular, the EIP on Smart Cities and Communities includes a number of Action Clusters which are relevant to this action (e.g. Business Models, Finance and Procurement, Policy and Regulations / Integrated Planning, Integrated Infrastructures & Processes (including Open Data). Of course, this initiative should also offer the opportunity to Member States and industries to better coordinate their R&I efforts on smart cities.

Next steps

The stakeholders agree to further detail the targets and to develop within 6 months a detailed implementation plan for the delivery of these targets, determine joint and/or coordinated actions, identify the ways in which the EU and national research and innovation programs could most usefully contribute, identify the contributions of the private sector, research organizations, and universities, identify all issues of technological, socio-economic, regulatory or other nature that may be of relevance in achieving the targets, and report regularly on the progress with the purpose to monitor the realisation of the targets and take rectifying action where and whenever necessary.

The stakeholders intend to rely on the current Smart Cities and Communities environment i.e. among others the European Innovation Partnership on Smart Cities and Communities, the ERA_NET on Smart Cities, the EERA Joint Programme on Smart Cities, the Joint Programming Initiative Urban Europe, the Smart Cities Information System, the Covenant of Mayors, the Green Digital Charter, etc., for discussing and agreeing on the implementation plan.