

Horizon 2020 and Smart Cities & Communities: Our recommendations for the work programmes 2018-2020

The mid-term review of the EU's Multi-Annual Financial Framework at the end of 2016 has resulted in an additional €400 million for the Horizon2020 (H2020) programme in its last years. This is a positive development that can enable to further support the locally driven energy transition. In this briefing, Energy Cities shares its recommendations for using these crucial additional funds in the Horizon 2020 work programmes 2018-2020. Moreover, we provide a number of proposals to solidify and upscale the Smart Cities & Communities (SCC) further.

Our recommendations in a nutshell

- Introduce new H2020 thematic priorities: "Territorial Governance", "Transition Management" & "Linking Climate Mitigation & Adaptation"
- Increase funding support for local and regional authorities to develop innovative, collaborative financing schemes by strengthening and extending the axis "Innovative Financing for Energy Efficiency Investments"
- Expand axes on engaging consumers & public authorities through new innovative calls on "Transition storytelling" and "local Energy Unions"
- Introduce blockchain in cities, smart urban solar and smart urban energy storage as calls in ICT for Energy Efficiency and the Low-Carbon Economy Priorities
- Simplify the H2020 application approach & provide more dedicated support for applicants
- Smart Cities & Communities: stronger focus on collaboration within the city administration and between the Smart City Projects
- Smart Cities & Communities: establishing 'Smart City Agencies' in Europe's cities

Using additional funds to create new thematic priorities

Territorial Governance

Rationale

A key objective of the EU treaty is to foster social and territorial cohesion. In order to make the energy transition a reality throughout the EU, Europe's territories need to be empowered to drive the system change towards a sustainable, clean energy society. Local and regional authorities are the key players that can bring different stakeholders on their territories together in mutually beneficial partnerships for the energy transition.

Who should be supported

Local and regional authorities throughout Europe.

What should be supported?

This new thematic priority can support local and regional authorities concretely by funding 1 local / regional energy manager in selected applicant cities and regions. The need for this EU funding is evident in times of crisis when public budgets are constrained, and fewer municipal staff having to take on more and more responsibilities. An extra staff in charge of establishing and coordinating local and regional energy transition partnerships, bringing the relevant stakeholders (e.g. business, academia, communities, entrepreneurs, etc.) regularly around the table and leading the process of co-defining a territorial governance structure towards 2050 that all stakeholders can support, could provide an important boost to the energy transition in European territories.

Transition Management

Rationale

The transition towards a just, sustainable energy system based on clean energy sources is inevitable if the EU is to reach its long-term climate and energy objectives. The transition is not an automated process: it needs to be managed carefully, consistently and with sustainable human and financial resources in place. As the energy transition in the EU has long been driven from the bottom-up, it is evident that European efforts to support local and regional authorities are required.

Who should be supported

Local and regional authorities across Europe.

What should be supported?

While many cities have already defined their long-term energy vision, many have not yet been able to define clear roadmaps on how to achieve their visions. What actions are needed from e.g. 2050 or 2030 until today (retroplanning/backcasting) in order to make the vision a reality? Where will the measures have to be taken in order to successfully implement the local energy transition?

This new thematic priority could fund 1 transition manager in selected applicant cities and regions in order to help local and regional authorities better manage the long-term energy transition. This transition manager would be in charge of e.g. developing cost-effective project pipelines and implementing a scoreboard that could be based e.g. on 3Ds pillars (Democratization – Decentralization – Divestment) to track the transition progress.

In addition to this, selected cities and regions should establish a public dialogue – facilitated by the transition manager - with all relevant local/regional stakeholders (e.g. citizens, utilities, community organizations, etc.) in order to come to an agreement on what is needed and in which order, to ensure the success of the local/regional transition process. This collaborative measure is needed in order to gain acceptance from all local/regional stakeholders for the long-term phase out of fossil fuels in cities and regions, such as for the dissolution of fossil grid-connected systems and their replacement through renewable-based ones. These long-term decisions, which usually enter into force 10-15 years later in cities and regions, need planning and investment certainty, as well as a city-/region-wide agreement.

Linking Climate Mitigation & Adaptation

Rationale

In the Covenant of Mayors for Climate & Energy, cities will develop sustainable energy and climate action plans (SECAP) in order to mitigate/adapt to climate change and help the EU reach its 2030 targets. This key initiative stresses that cities shall better link climate mitigation and adaptation



measures in order to leverage co-benefits, make their cities more resilient and ensure affordable access to energy for all. However, many cities don't have much experience yet with linking both mitigation and adaptation measures in a coherent long-term planning exercise.

Who should be supported?

Local authorities across Europe.

What should be supported?

This new thematic priority should encourage more research & innovation into linking mitigation & adaptation measures at the local level in order to provide cities with better tools to engage in this undertaking. What mitigation and adaptation measures can cities introduce that strengthen their resilience to the unavoidable impacts of climate change on their territories, while at the same time advance on their other objectives such as reduction of GHG emissions or increasing energy efficiency?

Strengthen and extend axis “Innovative Financing for Energy Efficiency Investments”

Rationale

On a regular basis, local and regional authorities would need more funding know-how and tools in order to go further in their energy and climate policies. The need is therefore evident for the massive roll-out of innovative, collaborative financing schemes that use public and private funds to finance measures not only in the field of energy efficiency, but also in renewable energy or energy storage. H2020 and the past Intelligent Energy Europe (IEE) programme have already done an invaluable job in supporting such capacity-building for local and regional authorities: The IEE-funded project INFINITE Solutions for example has succeeded in replicating several innovative financing schemes (Intracting, Soft Loans) throughout local and regional authorities across Europe and has been even implemented in universities in France! Similarly, the ELENA-EIB programme has done an excellent job in building up the capacity of local and regional authorities to develop tangible and bankable sustainable energy projects in diverse fields such as local energy production, retrofitting buildings or sustainable urban mobility.

Who should be supported?

Local and regional authorities, regional energy agencies, networks of local and regional authorities across Europe.

What should be supported?

Building on the excellent work of IEE, ELENA and the axis “Innovative Financing for Energy Efficiency Investments”, the H2020 work programmes for 2018 and 2019 can go further in their support for local and regional authorities in terms of innovative financing solutions.

Citizen ownership is key in order to ensure a widespread acceptance of the energy transition and the fulfilment of the Paris Agreement. Hybrid/shared collaborative ownership from cities and citizens, such as in the form of municipal energy companies or energy cooperatives, has the potential to ensure societal acceptance for the transition. A supplementary thematic in this axis could hence research further into what forms of co-ownership by cities and citizens can prove to be beneficial in creating local jobs, investment and growth, and contribute to achieving the European energy & climate objectives.

In addition to this, another thematic could encourage more research into setting up local energy transition funds (as currently being done in the Belgian city of Mouscron through a cooperation of the local authority with the citizen cooperative Energiris), that not only finance energy efficiency, but also renewables, e-mobility and other energy-related measures in cities. More H2020 research and



innovation in this particular field could contribute to better tackling the public funding gap at the local level, develop bankable projects and accelerate the implementation of the local transition.

Expand axes on engaging consumers & public authorities through new innovative calls on “Transition Storytelling” and “Local Energy Unions”

Rationale

The energy transition is happening across Europe but often it is not felt and experienced directly by EU citizens. Mayors across European cities are asking for concrete storytelling tools and narratives to illustrate what the transition will mean in their city, in order to make this process more visible and better understandable to their citizens.

Concerning the EU Energy Union, the process is set in motion to better link Member States’ energy systems and increase transnational interconnections. But this is only one part of the Energy Union equation. How can the Energy Union become more visible on the local level, and in the minds and hearts of EU citizens?

Who should be supported?

Local and regional authorities, academia, community power organisations.

What should be supported?

In the axis “Engaging consumers”, a new call can be introduced focusing on Transition storytelling. Research could be funded on how to make the impact and the implications of the energy transition more graspable/understandable for EU citizens. What common narrative can be used, what stories can be told, etc. that can make it clear that the transition can benefit everyone, and that the changes it will bring can help create more inclusive, just and sustainable societies across Europe? These are just a few of the issues that this new innovative call could tackle, in order to bring in Europe’s consumers and citizens more into the energy transition process.

In the axis “Engaging public authorities”, a new call can be introduced focusing on Local Energy Unions. Cities are looking for more spaces to innovate, work together and experiment, such as with Local Energy Unions, which can be e.g. trans-border energy systems where a city with an excess production of electricity in one country could easily supply a city in a neighboring country. Cities could test such innovative solutions as pilots for the duration of the H2020 funding period. Such support for innovative cross-border cooperation would also contribute to making the Energy Union more visible on the local level. Enabling such projects would also be cost-effective and boost energy security, as small-scale, decentralized energy systems (micro grids, trans-border micro-grids, etc.) can be flexible, resilient and cost-effective.

In order to reach the Decarbonize dimension of the Energy Union Strategy, it will also be key for public authorities to engage EU citizens strongly with green energy. Another dimension of the new “Local Energy Union” call can focus on making the EU the global number 1 in community energy, by supporting the scaling-up of community energy projects on the local level, financed by citizens and contributing to making local energy ecosystems more flexible, cost-effective and resilient.

Introduce blockchain in cities, smart urban solar and smart urban energy storage as calls in ICT for Energy Efficiency and the Low-Carbon Economy

Rationale

Several crucial thematics of the energy transition have unfortunately not found their place yet in the Horizon 2020 framework, such as the applications of the blockchain technology in cities, smart urban solar and smart urban energy storage. But many cities, such as in the Energy Cities network for instance, are looking precisely to work more on these issues, as e.g. by more concretely on building



innovative smart solar projects in their constituencies, making full use of their energy storage potential or exploring the possibilities of the blockchain technology in their constituencies. To tackle this gap, the ICT for Energy Efficiency and the Low-Carbon Economy priorities could feature several smaller-scale calls, each focusing on these different thematics – smart urban solar, blockchain in cities or smart urban energy storage.

Who should be supported?

Local and regional authorities across Europe

What should be supported?

Across the Atlantic, new smart urban solar solutions are popping up every day, such as an inclusive [community solar scheme](#) from the city of New York, or this [handy treasure map tool](#) that helps to map the solar potential of roofs in neighborhoods. The development of such innovative solar energy solutions could also be encouraged for European (Smart) cities. This could in turn be beneficial for European citizens, as more innovation in urban solar can help bring down energy costs for consumers, thereby also tackling energy poverty. It is also highly cost-effective in times of strained city budgets, and could free up funds for investments in other smart energy infrastructure. As regards the [blockchain technology](#) in Smart Cities, its full applicability has not yet been exploited, but its potentials are considered to be manifold: bring down energy bills for citizens, encourage collective and individual self-consumption and make energy systems more flexible, cost-effective, interconnected and resilient.

These calls could have a budget around €3-5 million, while at the same time encourage groupings of few cities in different EU countries to test and introduce smart urban solar, blockchain technology and smart urban energy storage approaches. These various groupings of cities could be put together in different clusters (smart urban solar, blockchain, smart urban energy storage), for which they would have funds and resources to come together regularly to share their experiences and exchange knowledge.

Simplify the H2020 funding approach & provide more dedicated support for applicants

Rationale

Unfortunately, few are the applicants coming from local and regional authorities, in particular in Eastern European and small EU Member States. Moreover, some axes like Project Development Assistance (PDA) or the ELENA-EIB programme are seeing few applications, although there would be space for more. How can this issue be solved for the benefit of both applicants and the European institutions and agencies driving the process?

Who should be supported?

Local and regional authorities, in particular from Eastern & South Europe.

What should be supported?

A 2-step application approach, as it is done widely already e.g. in the INTERREG programme, will be less time-consuming and more cost-effective for applicants. The dedicated support provided by the INTERREG secretariat to project applicants, not only in the pre-proposal phase, has been crucial to sustain the regularly high number of applicants from all across Europe in the various INTERREG calls. H2020 could draw inspiration from the INTERREG in this regard, and also provide this dedicated form of support to its applicants. Moreover, the EU Commission could organise extra capacity building for project preparation for applicants from CEE countries through its national contact points. These



efforts shall also be dedicated in particular to small and medium-sized cities in order to better enable them to participate in H2020. There should be no deadline for specific calls (as PDA assistance) and at least 2 (even better 3) times a year project evaluation for each step.

Smart Cities & Communities: stronger focus on collaboration within the city administration and between the Smart City Projects

Rationale

The SCC programme – a H2020 cross-cutting focus area – has aimed at bringing 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 and resource efficiency, new markets and new jobs. As a cross-cutting focus area, SCC has encouraged cities to work on many different fields – e-mobility, smart data, smart tools and services, nature-based solutions, smart grids, smart buildings, etc. For cities participating in the SCC programme, this cross-cutting work approach is a major benefit, as it drives collaboration not only between different city departments, but also with other stakeholders such as businesses, citizens or utilities. However, the emphasis on intra-city collaboration should be stronger, as SCC participant cities like Vienna have urged for. Moreover, a lacking collaboration partnership between SCC projects has led to time-consuming and inefficient activities for the involved cities.

Who should be supported?

Local authorities across Europe including medium-sized cities.

What should be supported?

The internal collaboration should be strengthened between the different city departments on the cross-cutting thematic of the SCC programme. This could be done namely by allocating more funds and mandays in the SCC programme for this undertaking. Moreover, actors like city networks could be given a more prominent role in the SCC programme, in order to facilitate the intra-city dialogue.

In order to tackle the lacking collaboration partnership framework between all SCC projects, a tender or CSA (Coordination & Support Action) should be set up. The winning consortium of this tender or CSA would then be in charge of coordinating the central activities of all SCC projects around information exchange, promotion and possibly joint replication. Moreover, this tender or CSA should assist all SCC projects in setting up a joint group of cities interested in replicating or scaling-up the Smart City solutions from the cities participating in the SCC programme. Putting this all in place would result in a useful, strong and cost-efficient collaboration partnership framework between all SCC projects.

Smart Cities & Communities: establishing 'Smart City Agencies' in Europe's cities

Rationale

Some 20 years ago, the EU funded local and regional energy agencies across Europe, which had a first critical impact on pushing forward the energy transition. These local and regional energy agencies are now established in Europe, but are not the instruments needed to rise up to the challenge of implementing Smart Cities all across the EU. In order to truly become a Smart City, a city has to look



beyond energy only, and deal with issues such as Industry 4.0, Big Data and Automation. For this, a new body will be needed in cities, an 'energy agency 2.0' or 'Smart City Agency'.

Who should be supported?

Local authorities across Europe including medium-sized cities.

What should be supported?

The new 'energy agency 2.0' or 'Smart City Agency', will be in charge of clustering all Smart City activities of a European city. This new body will look at how data can be used to shape the city's efficiency, reduce the use of resources, improve mobility flows or establish decentralized energy infrastructure such as community solar schemes, blockchain or smart urban storage. The 'energy agency 2.0' or 'Smart City Agency' will get all citizens involved in this undertaking, and co-design and implement with their help Smart City solutions in the city.

It will be quintessential that EU cities of all sizes benefit from having this new body in their city administration, especially small- to medium-sized cities and Eastern European cities. In terms of funding the 'energy agency 2.0' or 'Smart City Agency', one potential venue could be the EU Structural Funds in the next programming period (2021-2027), which would channel the required funds directly to the cities. This mutually beneficial partnership between the EU Commission and cities could be modelled e.g. after the Art.8 ERDF regulation, where already hundreds of EU cities manage directly a portion of EU funds.

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Energy Cities: The European Association of local authorities in energy transition.

We have more than 1,000 towns and cities members in 30 countries. Energy Cities leads the Covenant of Mayors' Office (www.eumayors.eu) and coordinates EU projects to capitalize on city pioneers and give inspiration to more territories based on our 36 proposals for the local energy transition. Visit our best practices [website](#) and read our blog and positions papers.

