



**European Committee  
of the Regions**

**ENVE-VI-040**

**23rd ENVE commission meeting, 4 April 2019**

## **WORKING DOCUMENT**

**Commission for the Environment, Climate Change and Energy**

**Implementing the Paris Agreement through innovative and sustainable  
energy transition at regional and local level**

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Rapporteur: **Witold STĘPIEŃ (PL/EPP)**  
Member of the Łódzkie Regional Assembly

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This document will be discussed at the meeting of the **Commission for the Environment, Climate Change and Energy** to be held on **Thursday, 4 April 2019 from 11 a.m. to 5.30 p.m.**

Reference document

Own-initiative opinion

# **Working document of the Commission for the Environment, Climate Change and Energy – Implementing the Paris Agreement through innovative and sustainable energy transition at regional and local level**

## **I. Introduction**

The Special [report](#) of the Intergovernmental Panel on Climate Change (IPCC)<sup>1</sup> outlines that limiting global warming to 1.5°C above pre-industrial levels requires a rapid and broad transition across sectors to a sustainable, low-emission energy system.

Urgency is conveyed by the IPCC report for taking drastic steps towards a fundamental shift in the energy system. A worldwide scenario in line with the Paris Agreement objectives would call for RES to supply 70-85% of electricity by 2050. According to the 2017 statistics released by the European Environment Agency (EEA)<sup>2</sup>, the energy supply sector is the largest contributor (28%) of direct greenhouse gas (GHG) emissions in the EU.

Tackling these challenges requires a profound change throughout the energy system – from production, to transmission, to consumption - directly impacting on infrastructures, the market and society at large. The scale of this transformation requires shared, integrated solutions: close cooperation across all levels of government and civil society is essential to meet the objectives of the Paris Agreement and to implement a sustainable energy transition. As the closest level to citizens, and the level most affected by climate change, local and regional governments (LARs) are best positioned to engage communities and implement ambitious and timely action.

In the Nationally Determined Contributions (NDCs), the EU and its Member States have committed to a mutually binding target of at least 40% domestic reduction in GHG emissions by 2030 compared to 1990. The [Clean Energy for All Europeans package](#)<sup>3</sup> provides a regulatory framework for the implementation of EU strategy and aims to empower European consumers to become active players in the energy transition, and strives to stimulate Europe's industrial competitiveness and boost growth and jobs.

## **II. Challenges and solutions: designing a way forward for a successful energy transition**

*Complex challenges require shared solutions: enabling contributions to achieving the Paris Agreement at all levels*

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<sup>1</sup> Special Report on Global Warming of 1.5 °C, Intergovernmental Panel on Climate Change (IPCC), October 2018.

<sup>2</sup> Final Report of the High-Level Panel of the European Decarbonisation Pathways Initiative, Directorate-General for Research and Innovation, European Commission, November 2018.

<sup>3</sup> The Package includes the targets for 2030 of a 40% reduction in CO<sub>2</sub> emissions, a binding renewable energy target of at least 32% and an energy efficiency target of at least 32.5% - with a possible upward revision in 2023. In support of these objectives, the framework also sets up a robust governance system for the Energy Union, requiring each Member State to draft integrated National Energy and Climate Plans for 2021 to 2030, outlining how they will achieve their respective targets.

Cities and regions are key in delivering the goals of the Paris Agreement: LRAs, as the closest level to the citizens, have first-hand knowledge of their challenges and needs, and are ideally placed to engage communities in the process of change brought about by the energy transition. In addition, local governments act not only as administrators but also as service providers, leading by example and inspiring the community that they were elected to represent. LRAs, as significant purchasers of energy-demanding services (e.g. electricity grids, heating services, public transport), can also demonstrate good practice via public procurement procedures.

Over 7 700 local and regional governments across Europe have made commitments to ambitious targets and action to reduce GHG emissions and tackle climate change by participating in initiatives such as the Covenant of Mayors. They have been developing strategies and action plans (SECAPs) as a direct response to the needs of their communities and the vision that these communities have of a more sustainable future. LRAs should be encouraged to deepen and extend such plans, and be supported in mainstreaming strategies for implementing the energy transition in their territory. They should be enabled to identify pathways for energy transition, through broad involvement of the communities they represent, considering the local economic and social potential and pitfalls.

Establishing Locally/Regionally Determined Contributions (L/RDCs)<sup>4</sup> could be an important step in bridging the emissions gap. While LRAs' role in achieving the Paris Agreement's objectives is widely acknowledged, most face various constraints (political mandates, technical, financial, regulatory, social and data) in achieving a clean and just energy transition.

*Local is beautiful: reaping the benefits and added values of growing energy decentralisation trends*

Deployment of decentralised energy is increasing across Europe, moving from centralised power generation and distribution to shared systems, mostly through the engagement of citizens and energy communities which consume the energy they produce (prosumers). While the energy prosumers phenomenon is not equally distributed across Member States, increasing access to digitalised services and platforms allows consumers to take part in the energy market more actively than ever before<sup>5</sup>.

To fully exploit the potential of renewable energy and in particular decentralised production, large-scale innovation is needed to prepare and digitalise transmission and distribution systems. To implement this shift, stable policies, regulations and funding schemes, and regulatory certainty and funding are required.

*Strengthening synergies: the energy transition is not a sectoral change but a systemic shift*

A sustainable energy transition needs to consider the energy system as a whole, with interlinked production, distribution and consumption. Energy efficiency measures are the starting point. Most of these sectors are closely interlinked with local and regional government operations. Local economic

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<sup>4</sup> Committee of the Regions, Outlook opinion, Climate governance after 2020: a European and global perspective – a contribution to the UNFCCC COP24, July 2018.

<sup>5</sup> Final Report of the High-Level Panel of the European Decarbonisation Pathways Initiative, Directorate-General for Research and Innovation, European Commission, November 2018.

activities, communications infrastructure, city services provision, industry operations and individual households all depend on a reliable and efficient supply of energy: this makes local and regional government action imperative to be able to guarantee energy security in their territories. Many LRAs already act as facilitator of the energy transition by exchanging knowledge and providing organisational and institutional platforms, with minimum financial engagement for stakeholders.

Integrated approaches targeting energy efficiency in buildings, industry and transport can provide cost-effective solutions, most of which are market-ready, able to cut emissions as well as costs and provide significant co-benefits for local communities. However, upfront costs and the investment capital needed, as well as regulations and split incentives, among other things, are significant barriers to implementation.

LRAs can also act as a catalyst, by raising awareness and facilitating knowledge. They can develop broader strategies, including not only the urban environments, but the entire region, and outline regulations and increase levels of energy efficiency in local standards - for example in the building sector – or develop strategies and fiscal incentives for the renovation of residential buildings. In Europe, buildings are responsible for 40% of energy consumption and 36% of CO<sub>2</sub>, but almost 75% of the building stock is energy-inefficient; this sector holds a great potential<sup>6</sup>.

*Transferring knowledge and fostering cohesion to enable a one-speed energy transition for Europe: supporting coal- and carbon-intensive regions as well as islands*

The energy transition provides a great opportunity to invest in future-proof infrastructure for Europe, and to drive a transformation that would benefit all Europeans' quality of life. Keeping in mind the diversity among European regions, it is important to design and enable a one-speed energy transition able to foster economic development and social cohesion, rather than creating divisions across the board. To this end, innovative approaches are needed in particular in coal- and carbon-intensive regions and islands whose specificities make this transition difficult and urgent.

Because of their particular context, coal- and carbon-intensive regions need specific support. Appropriate funding should be provided not only to ensure security of supply in the regions affected by systemic changes, but also to mitigate the social aspects of the transition and the impact on the economy – this could include preferential access to Cohesion Funds, as well as to programmes such as Horizon Europe and LIFE, where projects aimed at those regions whose regional authorities are involved in partnerships should have a greater chance of being supported. Traditions of coal- and carbon-intensive regions cause not only appreciation of the importance of energy production for civilisational development, but also the openness of society to innovation in the energy sector. This potential, hidden in a specific industrial atmosphere, should be treated not as a threat but as a development opportunity.

A solid process of knowledge transfer and capacity building is necessary to channel the skills and industrial tradition of these regions into more sustainable development. As modernising technologies

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<sup>6</sup> European Commission's Executive Agency for Small and Medium-sized Enterprises, High energy performing buildings - Support for innovation and market uptake under Horizon 2020 energy efficiency, October 2018.

and mainstreaming them is a key aspect of decarbonisation, research and innovation hubs should be created at regional level, particularly in coal regions, bringing together science and industry, and also widely engaging citizens in this transition. Regional vocational training centres should likewise be established, providing capacity building and training to repurpose labour skills towards more sustainable industries. These hubs should act as a sounding board, by informing and raising awareness among citizens and local communities and providing a space for designing the local transition process in a participative manner.

To fully benefit from local resources, a shift to a circular and bio-based economy should be encouraged. This would be particularly important in coal- and carbon-intensive regions, using local natural resources and bio-based raw materials. The circular economy provides great opportunities for local and regional governments. These can build awareness and encourage sustainable consumption behaviour, but also develop fully-fledged circular economy plans linking local waste management, raw material recovery, processing and infrastructures.

*A sustainable energy transition is a transition for all: planned, managed, implemented and with citizens at the core*

The energy transition is an opportunity to create and enable a secure, fair and European energy market, with citizens at its core: enhancing transparency, creating cross-border networks, improvising access and distribution of renewable energy, harmonising prices and boosting the competitiveness of renewable energy, and safeguarding roles and rights for self-consumers and communities in the energy system.

This shift to a new energy model can only be successful if it fosters energy security and social cohesion, and it must be facilitated by regional and local policies. A fair distribution of the economic and social costs, as well as the emerging benefits, associated with the energy transition between all market actors, including citizens, is necessary.

Many technologies for a cost-effective climate-neutral Europe are already available, but appropriate funding and regulatory support for systematic, fast-track implementation are still lacking. Scientific and technologically neutral decarbonisation scenarios show that the entire and interacting energy system can reduce (4.340 Mton or) 86% CO<sub>2</sub> emissions compared to 1990, only using known technologies that are available on the market<sup>7</sup>. Innovation nonetheless does not permeate through levels of government, and the role of local governments should be enhanced to mainstream the introduction of innovative solutions and new technologies into the market by providing substantial demand.

Even where the transition can be made possible from a technological point of view, many barriers relate to policy and regulations, organisational structures, funding priorities and payback requirements of past and future investments, as well as social acceptance. These barriers need to be addressed in Horizon Europe, where energy-related research and innovation needs to mainstream the integration between social sciences projects and technical energy projects, addressing more holistically the impacts of the energy transition.

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<sup>7</sup> Heat Roadmap Europe, Quantifying the Impact of Low-Carbon Heating and Cooling Roadmaps, 2018.

Access to financing is crucial. Local climate action should be supported by incentives to develop sound divestment plans from fossil fuel and unsustainable practices, freeing up resources for sustainable investments, while creating opportunities for the development of new value-added chains as well as new jobs is crucial to this process, and local and regional governments are the key actors for enabling and managing this transition effectively.

While legal and administrative regulations are rather rigid and binding, other instruments are flexible and can be used depending on local and regional specificity. Activities based on "soft" solutions resulting from a social contract (self-government authorities, corporations, employers) offer opportunities for developing environmentally-friendly attitudes. Instruments that have a psycho-social impact cannot be overestimated in the context of environmental awareness-building and for the approval of legal and economic arrangements that have been adopted. Their wide array facilitates multi-track education for sustainable mobility and, consequently, the active protection of air by adopting specific behaviour patterns. Also, many psychological "nudges" designed to affect individual behaviour can be applied.<sup>8</sup>

However, even with a strong commitment to implementing climate action, project implementation can often be hindered by a lack of capacity to develop, manage and implement an investment. Sufficient autonomy and capacity to borrow and repay debt through revenue-generating capacity at the project level, through municipal budgets or other sources of finance, can also be an obstacle, especially for medium- and small-size municipalities who lack the capacity for developing projects of sufficient quality, or scale<sup>9</sup>.

Increased support and technical assistance in preparing and fast-tracking financing of local climate action projects is necessary to create a project pipeline stemming from local and regional climate strategies and plans<sup>10</sup>.

### III. Questions for members

With reference to the considerations above, the following questions should be addressed during the discussion:

- What are the most urgent measures to be implemented in support of cities and regions to accelerate climate action in the next 11 years?
- What is the role of technology, research and innovation in facilitating the reaching of the Paris Agreement objectives and increasing Europe's energy security?
- How can the barriers (financial and regulatory) standing in the way of a sustainable energy transition be overcome, in particular focusing on territories whose specificities make this

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<sup>8</sup> Rzeńca A., Sokołowicz M.E. (2018), Achieving Better Air Quality in Cities through Changes in Transport Behaviours: Dream or Necessity for Contemporary Regional Development? Review of Trends and Studies. [in:] Andriy Krysovaty, Yevhen Savelyev (eds.). Economic problems of Visegrad Group countries and Ukraine. Ternopil: Osadtsa, pp. 259-286.

<sup>9</sup> Deng-Beck, C. and Price, L. 2016, Gap Analysis Report: Closing the gap between finance and urban climate action, viewed 10 July 2017, <http://e-lib.iclei.org/>.

<sup>10</sup> Committee of the Regions, Financing climate action: opportunities and challenges for local and regional authorities, 2017.

transition difficult and where an innovative approach and support is most needed (coal- and carbon-intensive regions and islands)?

- How can LRAs' capacity for management, implementation and investment be better supported? How can citizen engagement and community projects be better considered and integrated?
- What kind of economic, legal and promotional tools should be used to effectively nudge citizens to use decarbonisation-enhancing solutions, including becoming prosumers?

Brussels,

#### IV. PROCEDURE

<b>Title</b>	Implementing the Paris Agreement through innovative and sustainable energy transition at regional and local level
<b>Reference(s)</b>	Own-initiative opinion
<b>Legal basis</b>	
<b>Procedural basis</b>	Rule 41(b)(ii)
<b>Date of Council/EP referral/Date of Commission letter</b>	
<b>Date of Bureau decision</b>	05/02/2019
<b>Commission responsible</b>	Commission for the Environment, Climate Change and Energy
<b>Rapporteur</b>	Witold STĘPIEŃ, Member of the Łódzkie Regional Assembly
<b>Analysis</b>	
<b>Discussed in commission</b>	Planned for 4 April 2019
<b>Date adopted by commission</b>	Scheduled for 12 June 2019
<b>Result of the vote in commission (majority, unanimity)</b>	
<b>Date adopted in plenary</b>	Scheduled for 7-10 October 2019
<b>Previous Committee opinions</b>	
<b>Date of subsidiarity monitoring consultation</b>	