WATenERgy CYCLE Urban water full cycle: from its source to its end-users and back to the environment WP6 Transnational Strategy, Policy Recommendation & Sustainability Joint Del. 6.3 Energy Recovery Policy Recommendation



PP2 - General Secretariat for Natural Environment and Water

WP6: Transnational Strategy, Policy Recommendation & Sustainability

- Responsible partners:
 - PP2 General Secretariat for Natural Environment and Water
- Partners involved: ALL
- Budget: 38,628.99€



WP6: Transnational Strategy, Policy Recommendation & Sustainability

- WP6 includes:
 - Water Pricing Policy Recommendation Paper
 - Water Efficiency Policy Recommendation Paper
 - Energy recovery Policy Recommendation Paper
 - Transnational Strategy, Policy Recommendation &
 Sustainability Action Plan



Existing policies on energy efficiency



- The Energy Efficiency Directive 2012/27/EU in 2012: This legislation entails a 20% improvement in energy efficiency.
- The new amending Directive on Energy Efficiency (2018/2002): This directive updated some specific provisions from the previous directive while introducing several new elements that set an energy efficiency target of at least 32.5% for 2030.
- 3-year national energy efficiency action plans (NEEAPs) of each individual country including annual progress reports that would outline the main drivers regarding the estimated energy consumption, planned energy efficiency measures, long-term renovation strategies, and the improvements that expect to achieve so that they can reach the EU 2020 target of 20%.

Regarding *Greece*, the program *Intelligent Energy Europe (IEE)* contributes to the European Strategy for Energy 2020 and facilitates the implementation of the European Action Plan for Energy Efficiency and Directive 2009/28/EC on the promotion of the use of Renewable Energy.



Existing policies on energy efficiency



Water Energy Nexus

Strategic actions

- Introduce water related criteria
- Develop integrated water and energy resources
- Understand the role of renewable energy

Operational actions

- Include energy efficiency indicators and targets to reduce losses and leakages
- Research on water and energy saving technologies
- Improve data gathering to understand the extent of water-energy interactions

European Green Deal (EGD): the EU's new growth strategy

The intention is to review of energy and climate legislation to scale up emissions reduction and boost the deployment of renewables and energy efficiency



Within WATenERgy CYCLE...











The use of energy generators can replace batteries to achieve stable and continuous data transmission

Lessons learnt Energy
consumption may
be reduced with
application of
energy saving
technologies
resulting in costs
reduction

Installation of In line microturbines inside pipelines achieve some energy recovery



Energy Recovery Policy Recommendation



Integrated management of water and energy resources since water and energy interdependence is acknowledged

Further development, and evaluation of the pilot actions outcomes will assist in establishing new knowledge

Definition of specific water efficiency related targets and energy efficiency indicators



Discussing policy recommendations...



Operational level

Develop and include energy efficiency indicators and targets for the water sector and set realistic water efficiency goals

More innovation and research on water- and energy-saving technologies

Improve the gathering of data from different sources

Strategic level

Improve water/energy synergies in existing policies

Introducing renewable energy into water operation

Introducing waterrelated criteria in energy policies

Improve transboundary monitoring, datasets and information, and accessibility

Governance level

Coordinate/integrate the different timeframes and geographic scales for planning in different sectors

Foster early, vertical and inter-sector cooperation



A step wise approach...



Local level

- Pilot actions demonstration
- Upscale
- Propose achievable targets
- Ensure funding

Regional level

- Intensify efforts
- Transfer knowledge
- Define regional targets
- Exchange scientific and technical information
- Allocate funds

National level

- Acknowledge needs
- Commit to policy recommendations
- Set national targets
- Seek/encourage transnational cooperation
- Allocate funds

EU level

- Engage international associations
- Integrate policies
- Publish Guidelinesgood practices
- Specify sustainability goals
- Allocate funds for research and implementation



Goal setting needs to be SMART

WATER

- Percentage of total losses
- Water consumption
- Density of water supply network
- Coverage of water network
- Yearly failures of water network

ENERGY

- Yearly energy consumed per m3 water for water treatment
- Yearly energy consumed per m3 water for water distribution



Policy implementation benefits - challenges



Benefits

- Common understanding on water efficiency
- Conserve water resources
- Lower prices of water to consumers
- Reduction of energy costs
- Better regulation of water allocation
- Reduced risks (e.g. water availability and security)
- Improve water services to customers
- Improved likelihood of complying with EU requirements and regional targets



Challenges

- Evaluating the effects of a policy becomes difficult
- Sufficient resources may be limited
- Limited stakeholders' participation
- Divergent views between stakeholders
- Lack of understanding and consensus
- Lack of commitment between parties



Key messages



Join water and energy policies



Share experiences



Upscale implementation



Set SMART goals



Improve data availability



Encourage participation

Synergy policies are the key to unlock implementation of sectoral policies

Policy> <Politics

