Lyon KPIs

The Smart Energy City, as a core to the concept of the Smart City, provides its users with a liveable, affordable, climate-friendly and engaging environment that supports the needs and interests of its users and is based on a sustainable economy. The Smart Energy City is highly energy and resource efficient, and is increasingly powered by renewable energy sources; it relies on integrated and resilient resource systems, as well as insight-driven and innovative approaches to strategic planning. The application of information, communication and technology are commonly a means to meet these objectives.

KP1 Resource system integration

	Level 1	*Level 2*	*Level 3*	*Level 4*
Integrated energy planning	Decision to build energy -climate strategy in 2007	Scenarios for 20*20*20 goals	123 actions in 20 different areas	
Development of ICT use	Part of Smart City strategy	Community Management System implemented	Demonstration projects	
Use of ICT tools in city planning and mgmt.	Experiments on mobility, digital services, smart grids & innovation	Development of all-mode information platform	Data services for travellers and freight professionals experiment in 2014	
Flexibility and transparency of service providers	Cell phone services for pay for parking and tourism activities	Empl digital services for the city by 2014	Public database on GHG emissions and energy mix	
Waste (integration with resource systems)	Waste action plan (2007-2017) adopted in 2006	Recycling increased from 22.5% in 2010 to 27.8% in 2011	Recycling at waste processing plants with charitable recovering	
Transportation (integration with energy systems)	Energy-Climate Plan to reduce energy consumption by 20% by 2020	Projects implemented to support modal shift to public transport		

KPI2 Access to energy services

	Level 1	*Level 2*	*Level 3*	*Level 4*
Access to affordable energy services	No specific policy on energy precariousness			
Level of energy services provided	Communities have no influence on services proposed by suppliers	Communities participation in local experiments is limited		

KP3 Resilience

	Level 1	*Level 2*	*Level 3*	*Level 4*
Self-sufficiency distributed generation	Planned increased proportion of RE from 4% to 20% in 2020	Development of heating network	Creation of new wood burning heating units	
Energy price shock	Prices regulated at national level protecting against price shocks	Strategies to reduce energy demand to reduce price shocks		

KP4 Energy efficiency

	Level 1	*Level 2*	*Level 3*	*Level 4*
Reduction of energy use	Demanding building energy performance levels applied.	Experiments on smart electricity network management.	Short-distance city	
Increasing efficiency	No control over gas/electricity networks.			
Increasing efficiency in the suply system	No control over energy supply			
Increasing end-use energy efficiency	Supporting the local energy agency	in advising on energy efficiency.		
Reduction in primary energy demand	Encouraging the development of smart grid experiments			

KPI5 Renewable energy

	Level 1	*Level 2*	*Level 3*	*Level 4*
Production of electricity and heat from RES	Dev. of DH network to receive more biomass and so-	lar (20%RE in energy consumption in 2020)		
Level of public and private investment in developing RES	20% overall RE share	New wood-fired boilers in several Lyon communities		
Penetration of RE in the city's energy portfolio	20% overall RE share			
GHG emissions caused by energy production & transportation	Action plan within Lyon's Energy-Climate Plan	Annual evaluation of GHG emissions		

KPI6 Active users

	Level 1	*Level 2*	*Level 3*	*Level 4*
Smart City-refective behaviour	Plan on education on sust.dev. from 1995, projects aiming at	understanding the challenges and motivations for	energy consumption measurement.	
Formal& informal hubs and innovation centers	Involved in clusters:	Chemistry/materials, IT, Energy, clean transportation&buses		
Self-sufficiency by users	Experiments; households not using tools e.g. smartphone apps			
Investment	Promotion of pilot projects	e.g. industrial heat recovery and ICT		

KPI7 Sustainable economy

	Level 1	Level 2	Level 3	Level 4
Investment in innovation (public&private)	Support of projects (portfolio of millions € worth).	Smart city strategy focusing on innovation.	Numerous experiments in clusters	
Green initiatives	Leading/supporting mobility projects.	Urban projects must apply sustainability citeria	Eco-district initiatives	

KPI8 Smart Governance

	Level 1	*Level 2*	*Level 3*	*Level 4*
Local stakeholders involved in investment and maintenance	GLs Smart City approach is based on collaborative projects	More than 12 collaborative projects are being carried out	A very large scale smart meter project is carried out involving 25000 households	
Governance	GL has developed a Smart City strategy	The Smart City Strategy includes an action plan, which has been implemented	GL cordinates a Opticities project with 23 partners aim to use urban mobility data	
e-Governance	Wants to developed a Smartdata set with reference and mgmt data			
Standards for data collection and analysis	Lyon is building a GIS database on energy	Climate and energy data are collected by OREGES	OREGES develops a public observation and information tool	
Government engagement with users	Decided to develop City Labs for public engagement	Around 20 City Labs are currently operating	Includes projects on comm transport, electric vehicles and energy data	