



# Municipality of Forlì

## Sustainable energy planning





# The Municipality of Forlì



Location:

Emilia-Romagna Region  
within the valley of the Po  
River

Population: 116.023  
inhabitants (2012)

Area: 228 km<sup>2</sup>

GDP/head: 21,485  
€/head (2011)



EARTH HOUR CITY CHALLENGE



60+  
YEARS

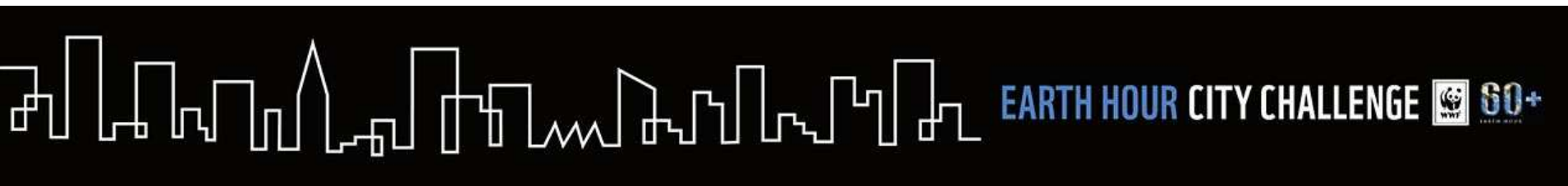


# Brief history



Founded in II a.d. by  
Romans as “Forum  
Livii” along the Emilia  
Road

two main Roman axis  
meet in Piazza Saffi

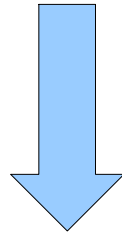




# Sustainable Energy Planning: Vision for the city



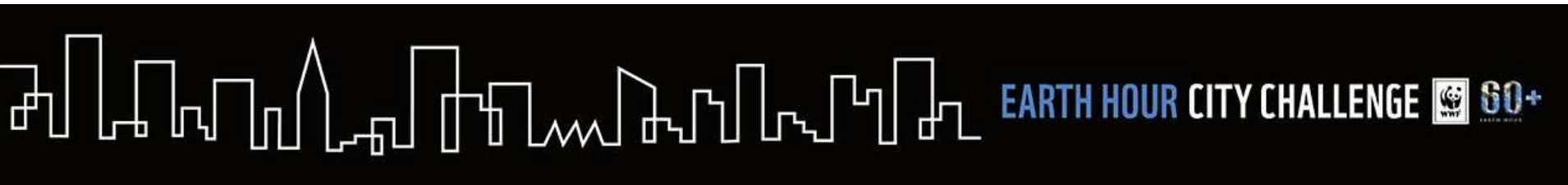
Managing the shift towards 0 emissions



Lifestyle changes

Sustainable Development and Planning

Sustainable City Governance





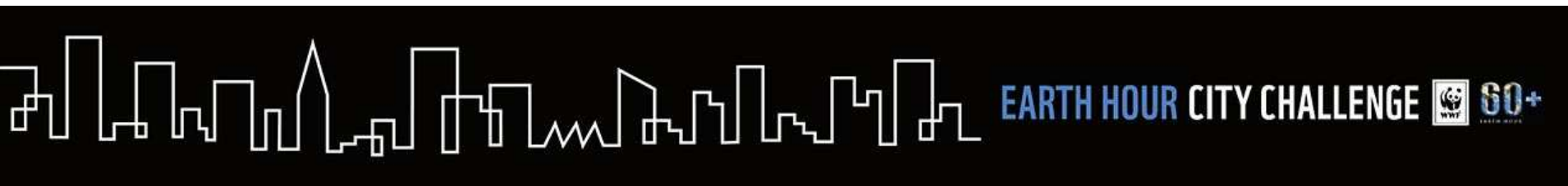
# Objectives



-25% of CO2 emissions by 2020

Divided in key areas:

0 emissions energy (RES)	27,5%
Energy efficiency	20%
Efficient and sustainable services	34,5%
Modal shift	18%





# Group 1: RES



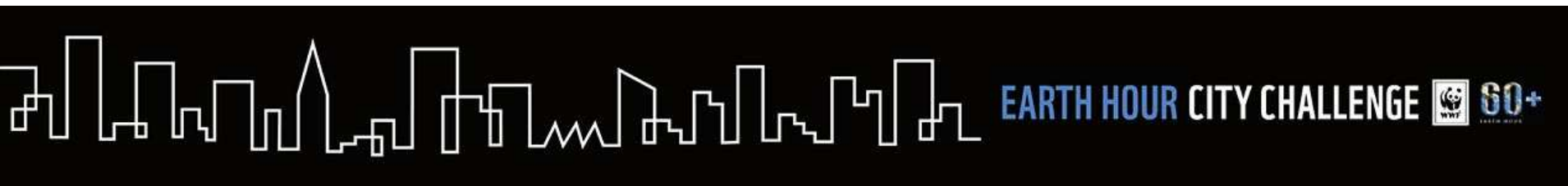
Photovoltaic plants  
public

Photovoltaic plants  
private

Biomass

Geothermal energy

Biogas plant from  
domestic organic  
waste





# RES Installations



Scuola Elementare di Carpinello 96 kWp

Scuola Media Palmezzano 76,8 kWp

Liceo Classico 100,8 kWp

Tettoia campo sportivo di San Martino in

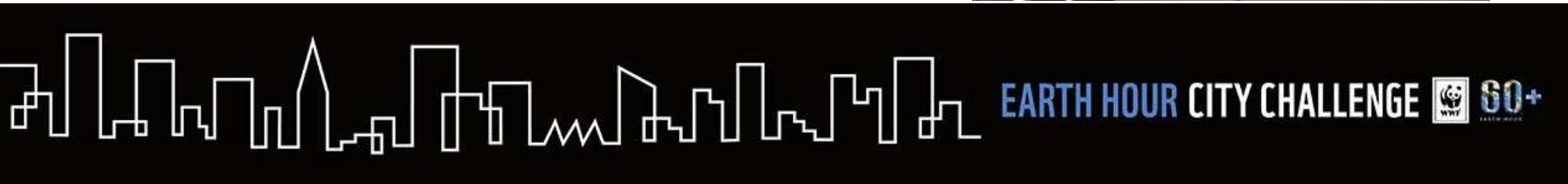
Strada 7,6 kWp

Pensiline terminal BUS ( bike sharing )

4,8 kWp

Produzione annua: 358.984 kWh/yr

CO2 evitate: 171 tCO2/yr





# RES Heat district



New plant producing 1.500MWh/yr

Area of 20.000 m<sup>2</sup>

already developed industrial area near existing  
heat district network

COMUNE DI FORLÌ - RONCO - VILLA SELVA SAN LEONARDO - RUE - tavola n. P-29



DOCUMENTAZIONE FOTOGRAFICA PIATTAFORMA ENERGETICA





## Group 2: Energy Efficiency



Renovation of heating systems for public buildings

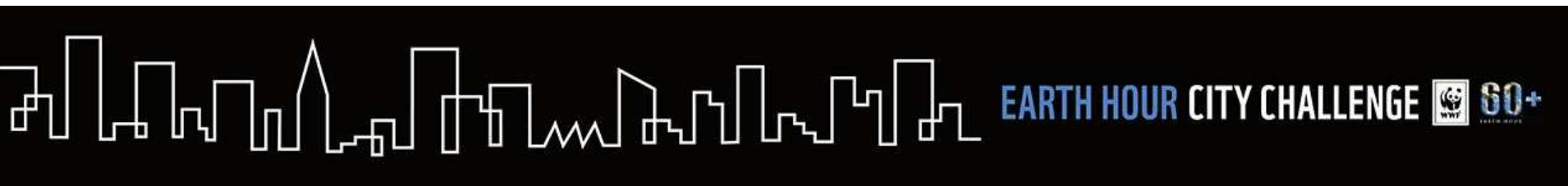
Renovation of public buildings

Urban renewal / private building renovation

Electrical efficiency for public buildings

Micro- CHP for apartment blocks

Electrical equipment



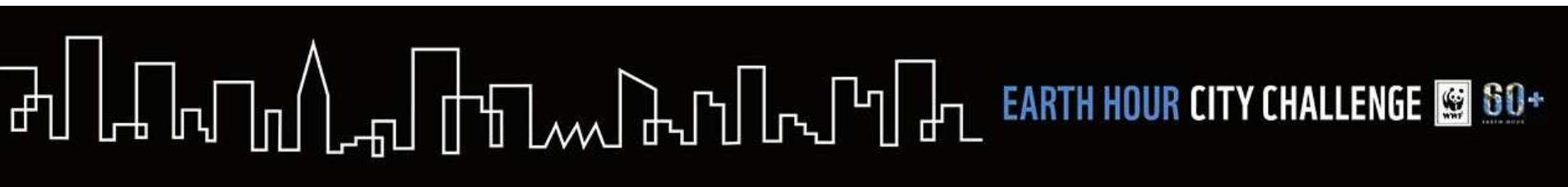
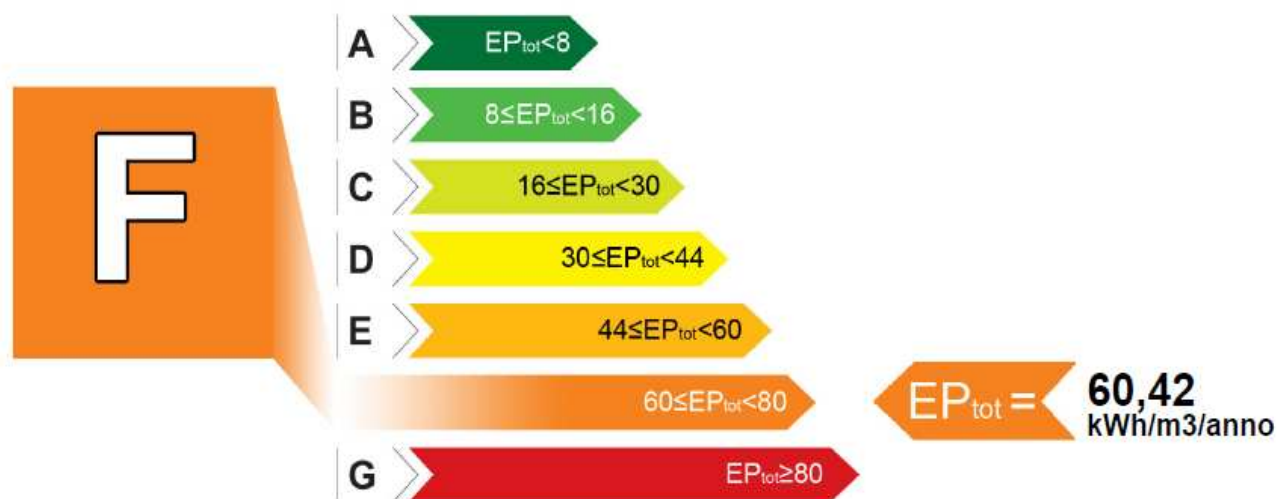


# Energy Efficiency Actions



New planning tools

Incentives to citizens for renovation costs





## Group 3: Efficient Services



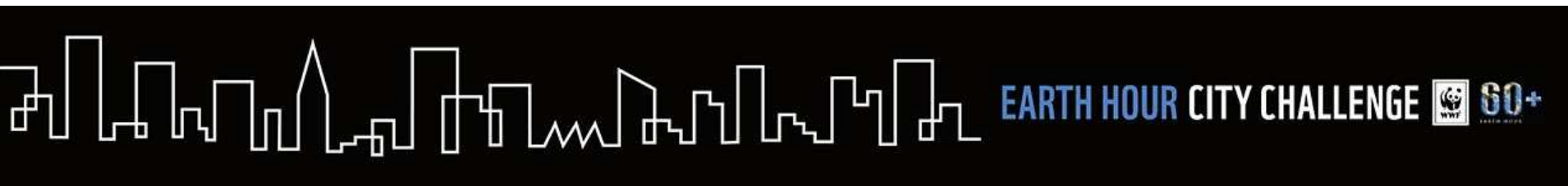
Waste reduction for  
incineration

Waste reduction per  
head

Development of city-wide  
district heating

Use of LED for traffic  
light and public lighting

Green Areas





## Group 3: Efficient Services



### Door to door collection

13,103 houses and  
28,339 citizens (¼  
population)

70 % separated  
collection (2011)



EARTH HOUR CITY CHALLENGE



60+  
EARTH HOUR

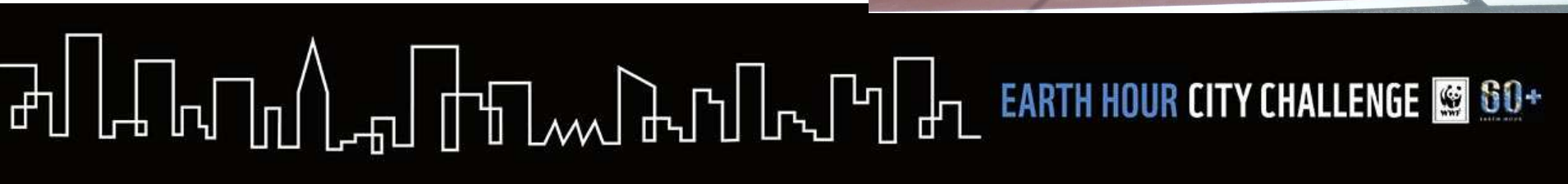
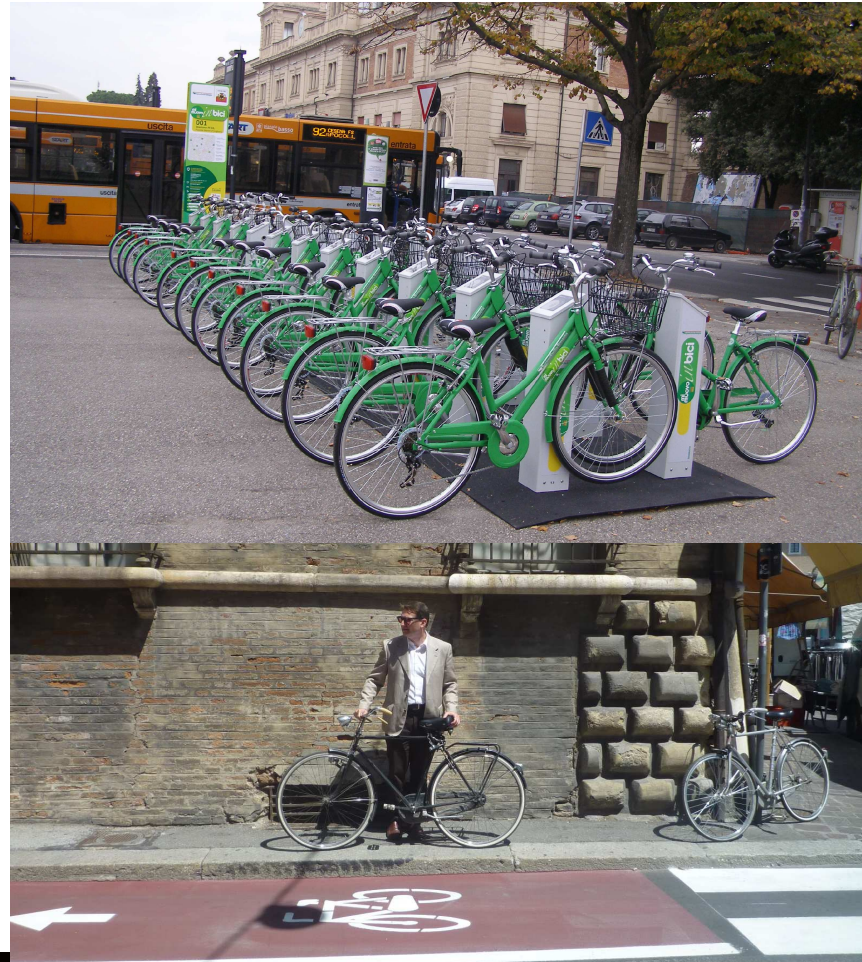


# Group 4: Sustainable Mobility



Modal shift of – 20%

- Cycle lanes
- Bus routes
- Mobility master plan integrating sustainable means of transport



EARTH HOUR CITY CHALLENGE  60+ hours more



# Communication campaigns



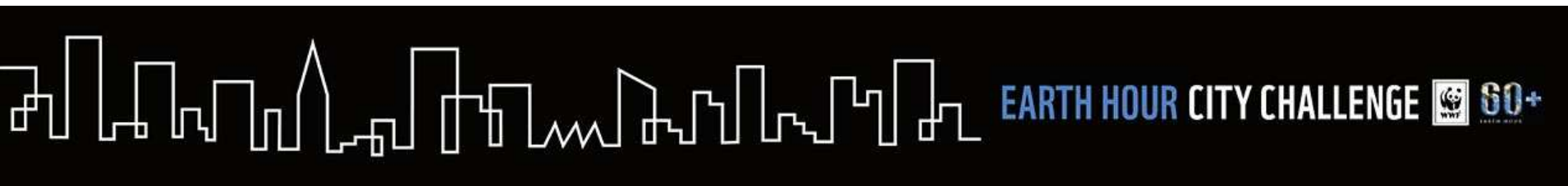
Initiatives for schools

Initiatives for citizens (i.e.  
cycling events)

First European Green Night



Washable and organic  
nappies  
pedi-bus





# Barriers and Constraints

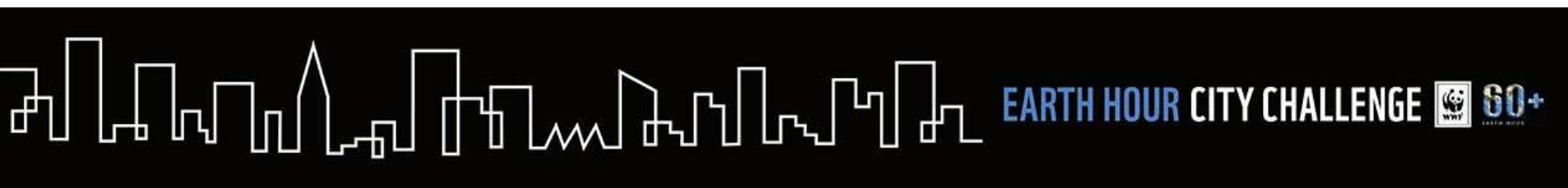


Little financial resources to  
set good examples

Weak energy management

Knowledge of new  
technologies

Burocratic procedures





# Key Priorities



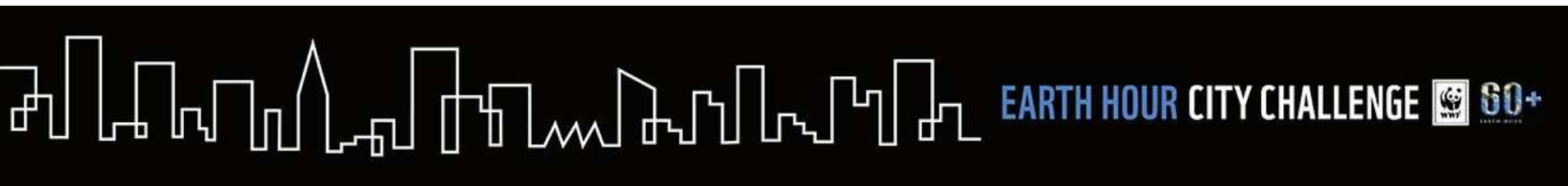
Renovation of schools

Better waste management

Local District Heating

Cycle lanes

More efficient and stronger  
communication  
campaigns





# Thank you



Francesca Ravaioli

Comune di Forlì

Piazza Saffi 8, Forlì

+ 39 0543 712574

[francesca.ravaioli@comune.forli.fc.it](mailto:francesca.ravaioli@comune.forli.fc.it)

