

Case Examples

Supporting Climate Neutrality at the Local Level

Module 2: Supporting Climate Neutrality
Enhancing VLRs for Sustainable, Green, and
Resilient Recovery & Transitions



UNITED NATIONS
DEPARTMENT OF ECONOMIC
AND SOCIAL AFFAIRS



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UCLG

United Cities
and Local Governments

Promoting Clean Energy

GHG Reductions



Energy



Buildings



Transport



Services

Measure → Reduce → Offset → Report

Case Example

City of Jyväskylä, Finland

Over 80 cities in the country participate in a network called “Towards Carbon-Neutral Cities” with a commitment to reduce GHG emissions by 80% by 2030 (from 2007 levels).

Jyväskylä, a city with a population of approximately 140,000 citizens, has set the following targets and strategies to achieve their goal



Targets

- Carbon neutrality (80% GHG emission reduction from 2012) by 2030
- Carbon-neutral electricity and heat production by 2030
- The share of renewable energy sources has increased to at least 80% in local energy production in 2030
- Energy consumption has decreased by 10% from the 2012 level in 2030
- Fossil-free and carbon-neutral energy production by 2050
- Fossil-free and carbon-neutral transport by 2050

Strategies

- Improved energy efficiency of buildings and public lighting
- Increased use of renewable energy sources
- Increase walking, cycling and use of public transport through densification, improvement of walking and cycling routes, incentives and campaigns to promote behavioral change
- Promote adoption of clean transport through improved biogas refueling and electric vehicle charging infrastructure, advice and public procurement criteria
- Increase use of renewable energy sources in local energy production;
- Increase use of solar energy in residential buildings; promote district cooling and waste heat recovery

Promoting Green Buildings

GHG Reductions



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Case Example

Community-level Solar Water Heating in Betim, Brazil

The city of Betim in Brazil installed over 1300 solar water heaters in low-income housing units during the period 2004 to 2007.

A survey conducted years later determined that for an average family of 3 to 4 members, electricity consumption was reduced by up to 20% and home electricity bills dropped by up to 57% owing to reduced consumption and qualifying tax exemptions for energy efficiency.



<https://www.cnet.com/home/energy-and-utilities/solar-water-heaters-everything-you-need-to-know/>

Sustainable Transport and Connectivity

GHG Reductions



Energy



Buildings



Transport



Services

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Case Example

Tracking progress of transit-oriented development

Many cities have created indicators and set targets to communicate their urban development plans to developers and citizens. For example:

Percentage of population with access to public transport

Cape Town's TOD Strategic Framework has set targets to improve access to transit by 12% by 2032, and to reduce passenger kilometres travelled by 23%.

Percentage of new development within a certain radius of transit stations

In New York, upzoning under plaNYC aims for 95% of new housing to be built within half a mile of mass transit stations.

Local Government Services

GHG Reductions



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Case Example

Wastewater Sludge Biogas Capture and Cogeneration in Almada, Portugal

A wastewater treatment plant in Almada, Portugal, serving about 80,000 residents captured biogas from its anaerobic sludge digestion facility and built two cogeneration units to convert the biogas to electricity and vapour and hot water.

The two cogeneration units generated together were able to meet 40% of the treatment plants energy needs, representing 550 MWh and 180 tonnes of carbon dioxide emissions reductions per year.

Additionally, sludge from the treatment plant is used as an agriculture fertilizer and the treated water used watering green spaces and for outdoor washing operations.

