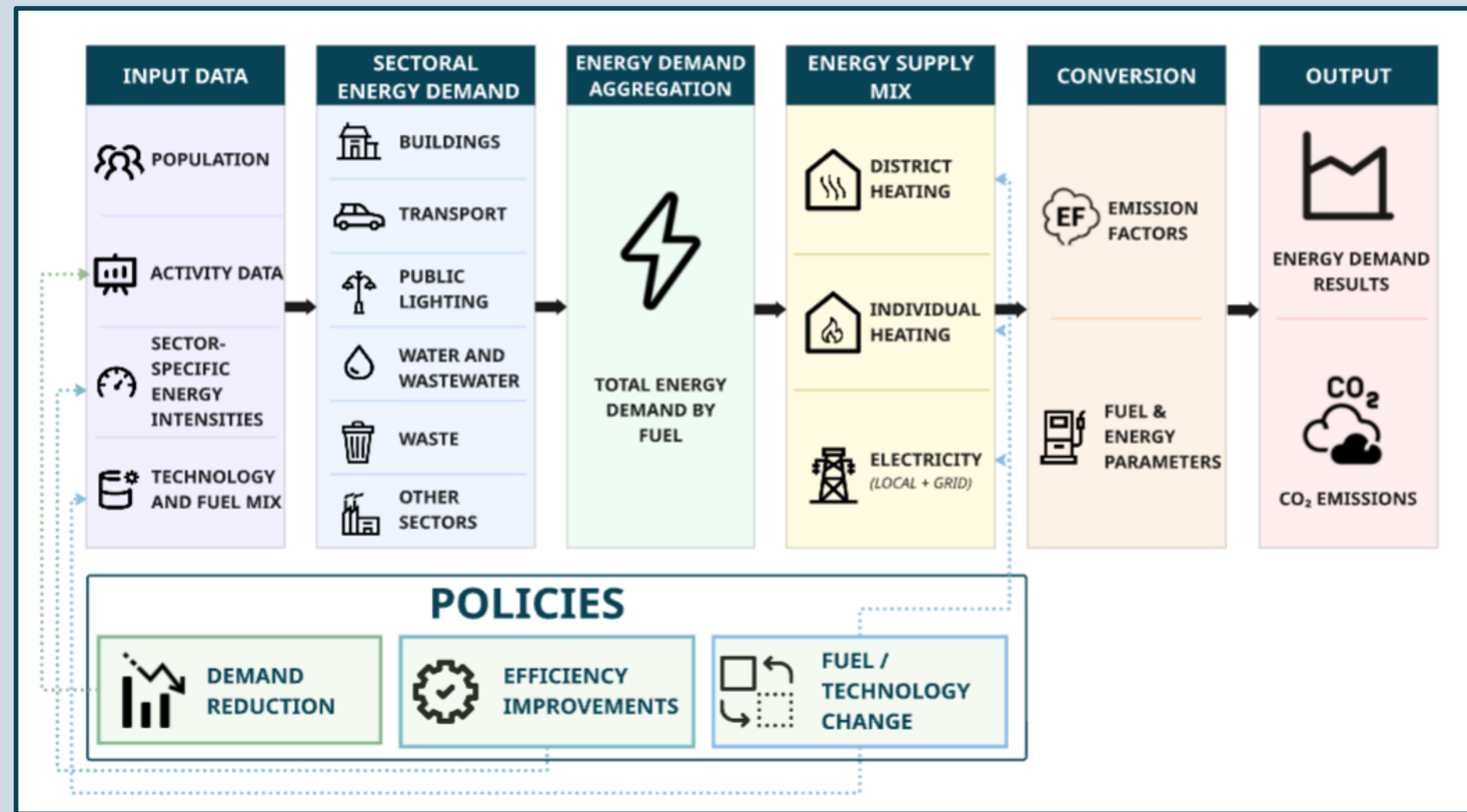


Effective energy transition planning at the municipal level requires improved decision-support tools, that link data, scenarios, and policy outcomes



A comprehensive, multi-sector perspective is essential to understand how policy choices influence energy demand and emissions across the entire municipal system.

## Introduction

Local governments play a key role in achieving climate neutrality, as they are responsible for planning and implementing measures across multiple sectors, including buildings, transport, and infrastructure.

However, municipalities often face significant challenges, such as limited data availability, restricted analytical capacity, and the complexity of integrated planning.

To address these challenges, this study presents a multi-sector decision-support tool and applies it to Gällivare, a municipality characterised by strong industrial activity and growing energy demand, to compare alternative development pathways.

## Methodology

The model was developed within the CommitClimate project, involving international partners and municipalities participating in testing and validation.

A simplified, demand-driven modelling approach is used to estimate sectoral energy demand based on activity data and energy intensities. Total energy demand is linked to the energy supply mix and emission factors to calculate CO<sub>2</sub> emissions.

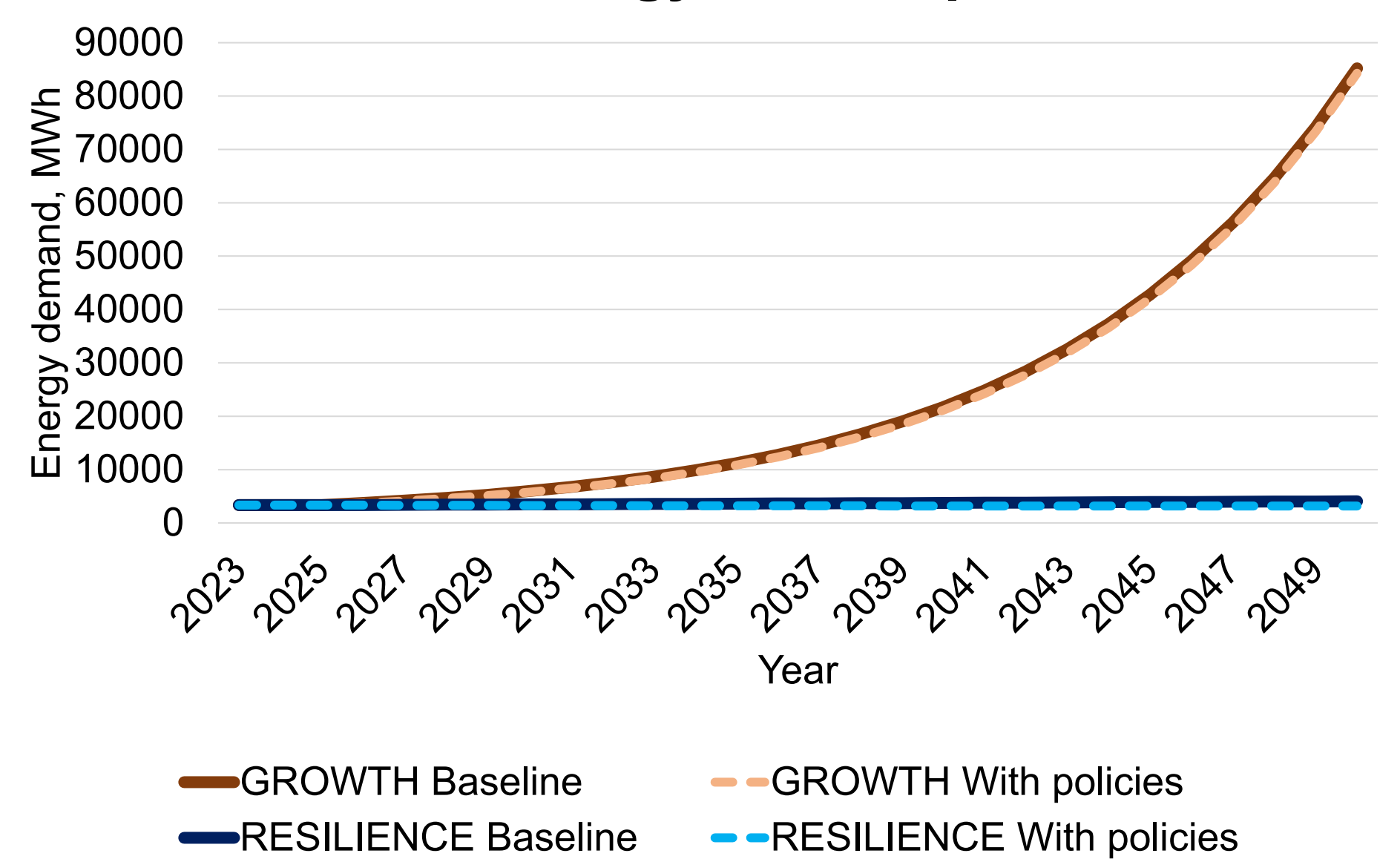
Policy interventions are applied across sectors as changes in demand, efficiency, and fuel or technology structure, enabling the comparison of two contrasting scenarios for Gällivare: a resilience-oriented pathway and a growth-driven pathway.

## Acknowledgement

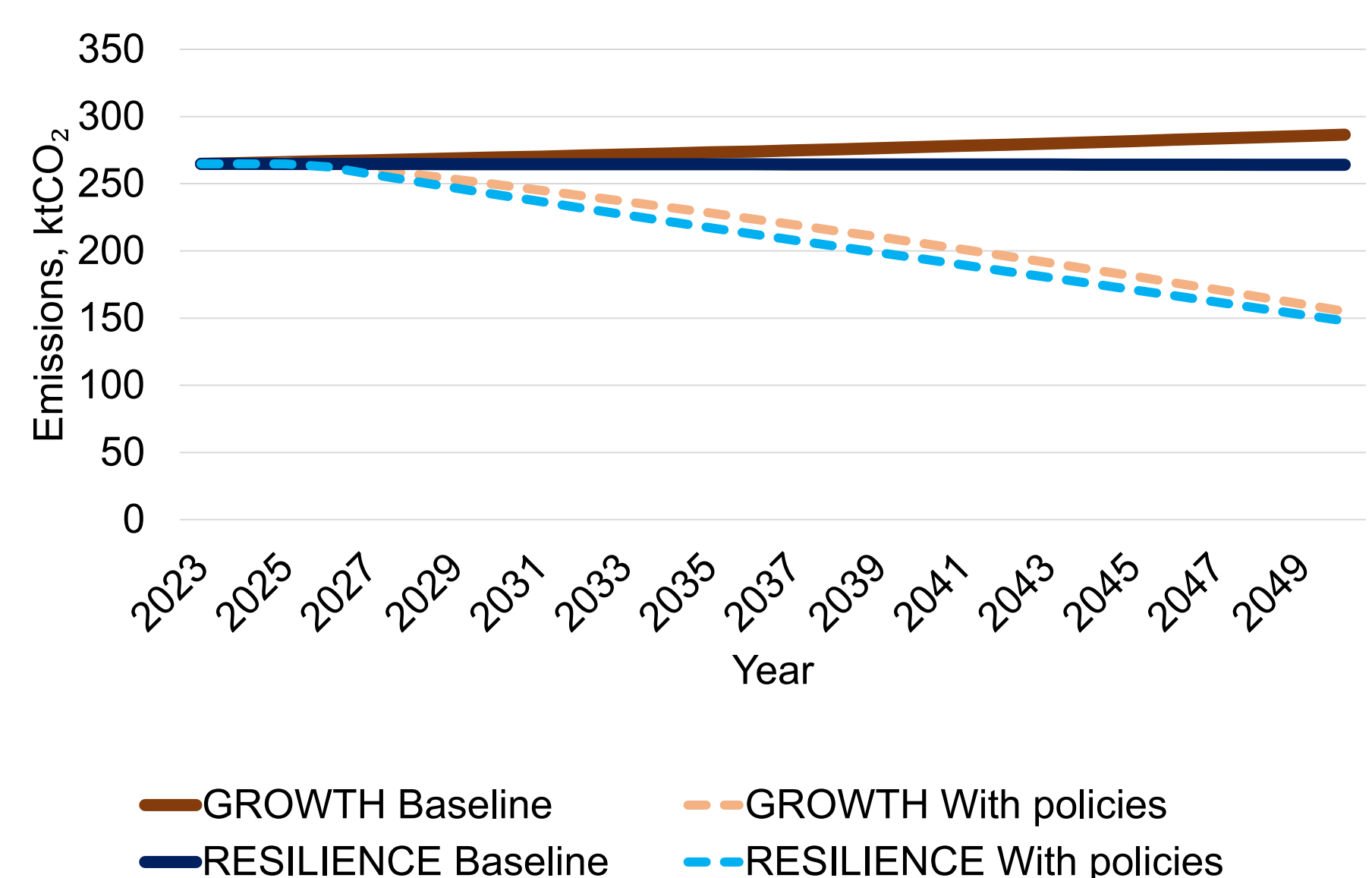
This work has been supported by the Interreg Baltic Sea Region Programme project CommitClimate [grant number #C026].

## Results

### Energy consumption



### Generated emissions



### Scenario comparison

- Resilience: -22% energy demand, -44% CO<sub>2</sub> emissions
- Growth: -1% energy demand, -46% CO<sub>2</sub> emissions