

## Case study

### Chapter 2

2.1 End-use demands

2.2 Resources

2.3 Conversion technologies

2.4 CO2 budget for the transition

2.5 Uncertainty ranges



## Methods

### Chapter 1

1.1 EnergyScope Pathway

1.2 Uncertainty quantification

1.3 Agent-based reinforcement learning

1.4 Robustness assessment via PCA



## Results

### Chapter 3

Atom-molecules dilemma

### Chapter 4

RL CO2-policy investigation

### Chapter 5

Robustness assessment of pathway roadmaps