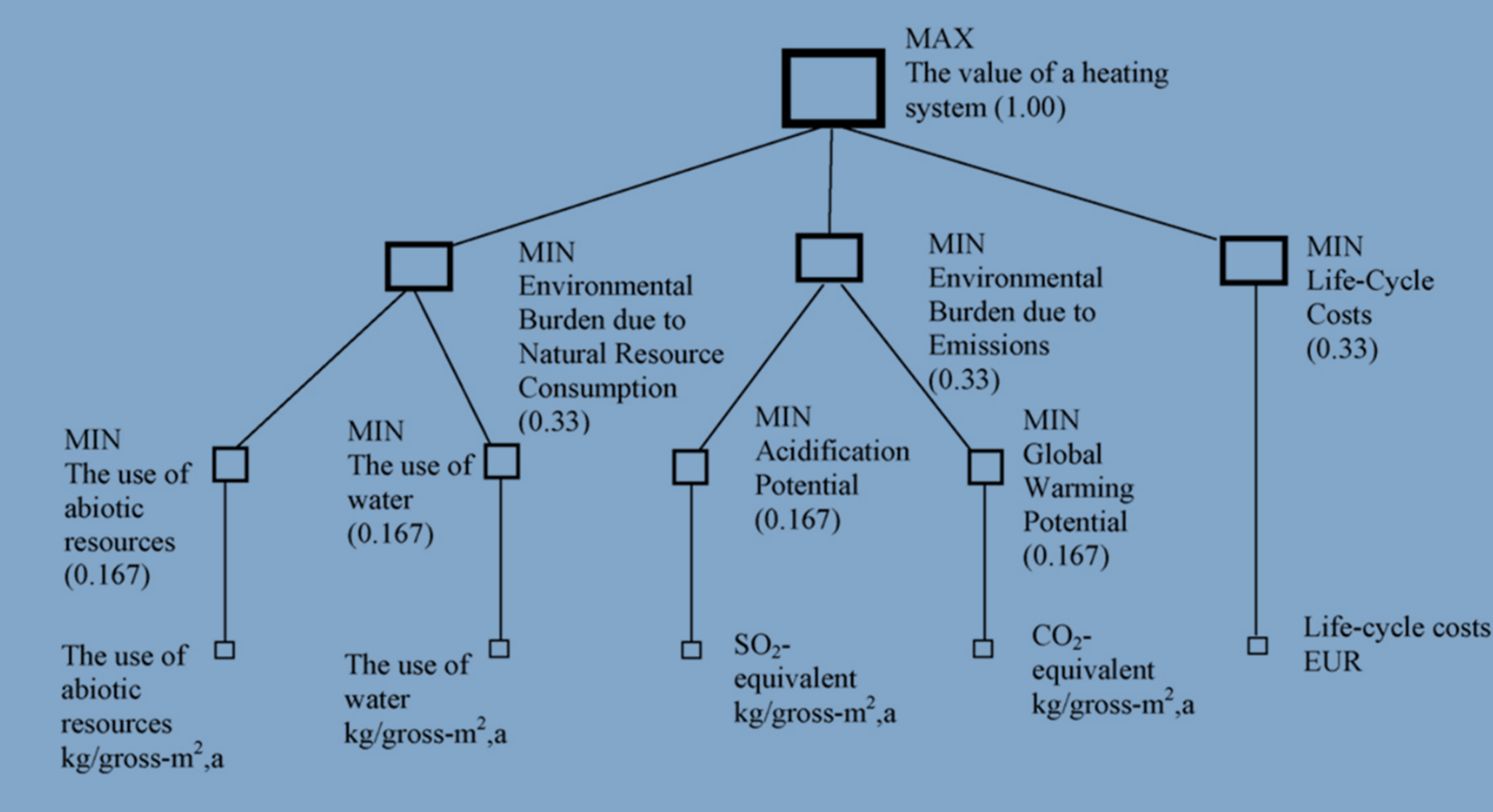


ENERGY POLICY AND MARKET MODELLING

decision support

political decision support, structuring, learning, communication
policy decisions in the parliament
multiple criteria: environment, costs, risks...



multi-criteria evaluation of residential energy supply systems

STRATEGIC

Time span: 15+ years
investment decisions

TACTICAL

3 years
risk management
1 year
budgeting, revisions

OPERATIONAL

1 month
financial optimisation
1 week
procurement planning
1-3 days
optimisation
1 min
regulation power

decision making levels and time span in energy industry

complementarity modelling

non-cooperative games of perfect and imperfect competition in deregulated and restructured energy markets

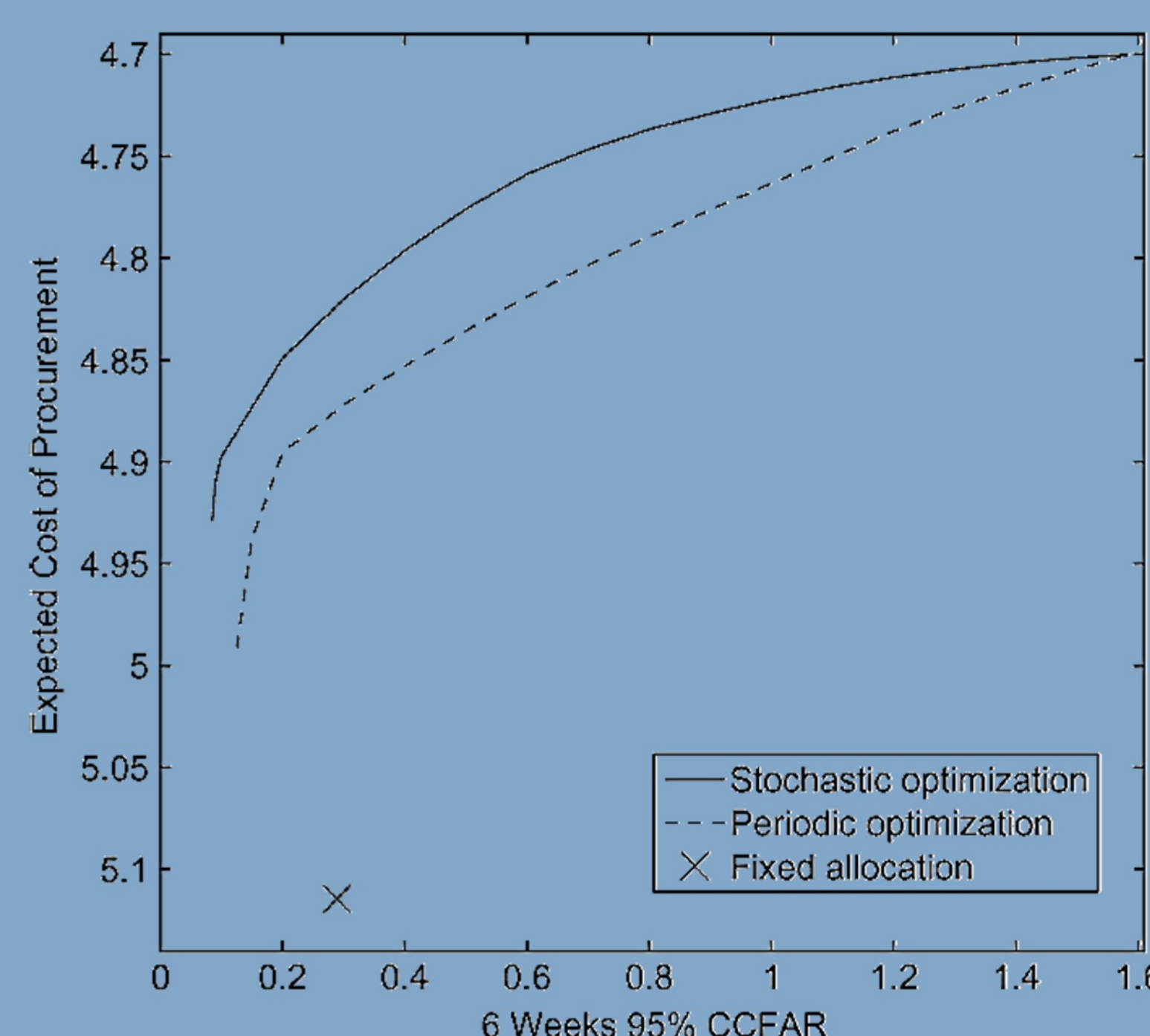
emission trading

promotes production with lower CO2 emissions
affects all electricity producers

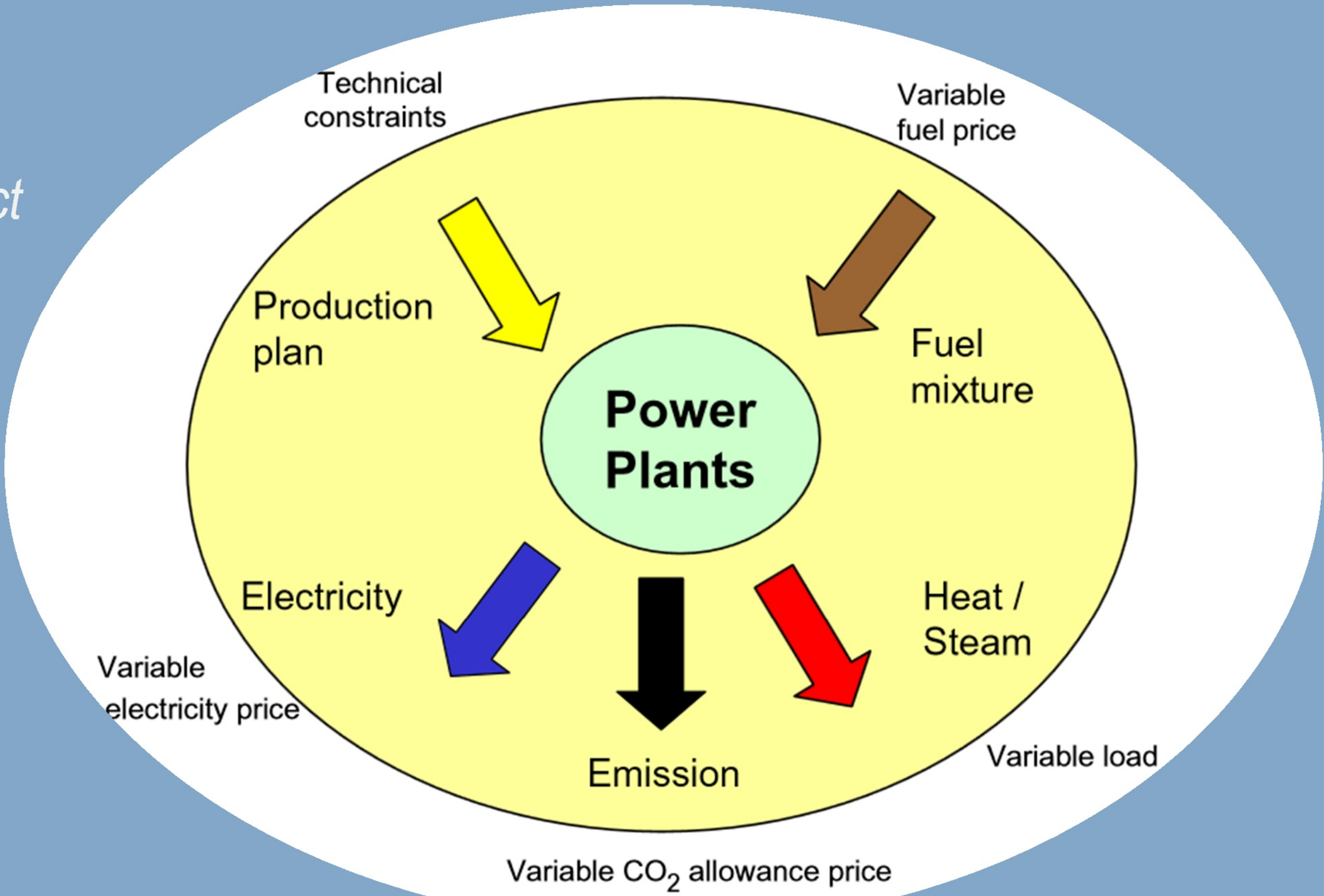


investment dynamics and market equilibrium

real options and game theory
investments partially or completely irreversible
strategic interactions between players



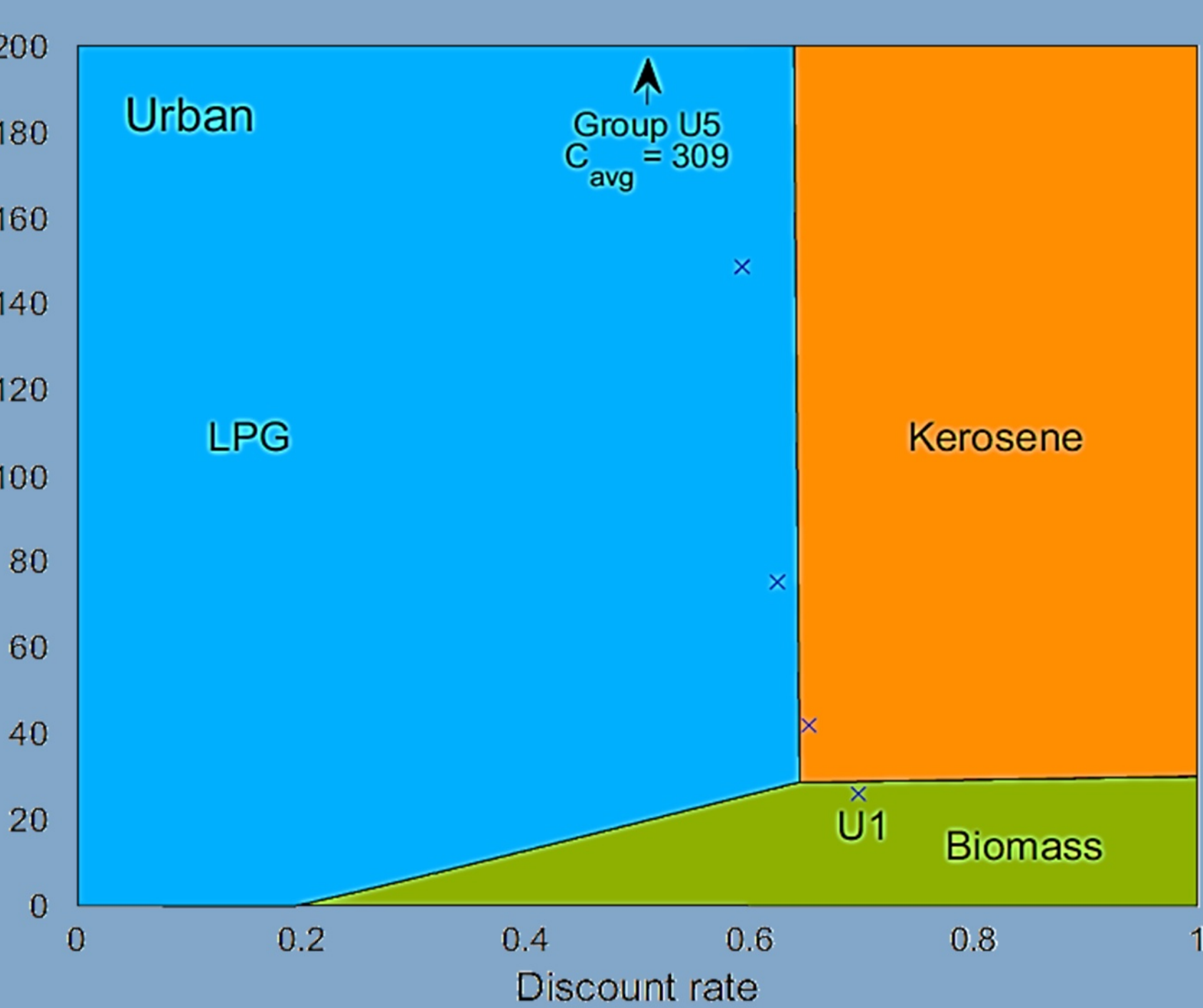
optimisation of electricity retailer's contract portfolio subject to risk preferences



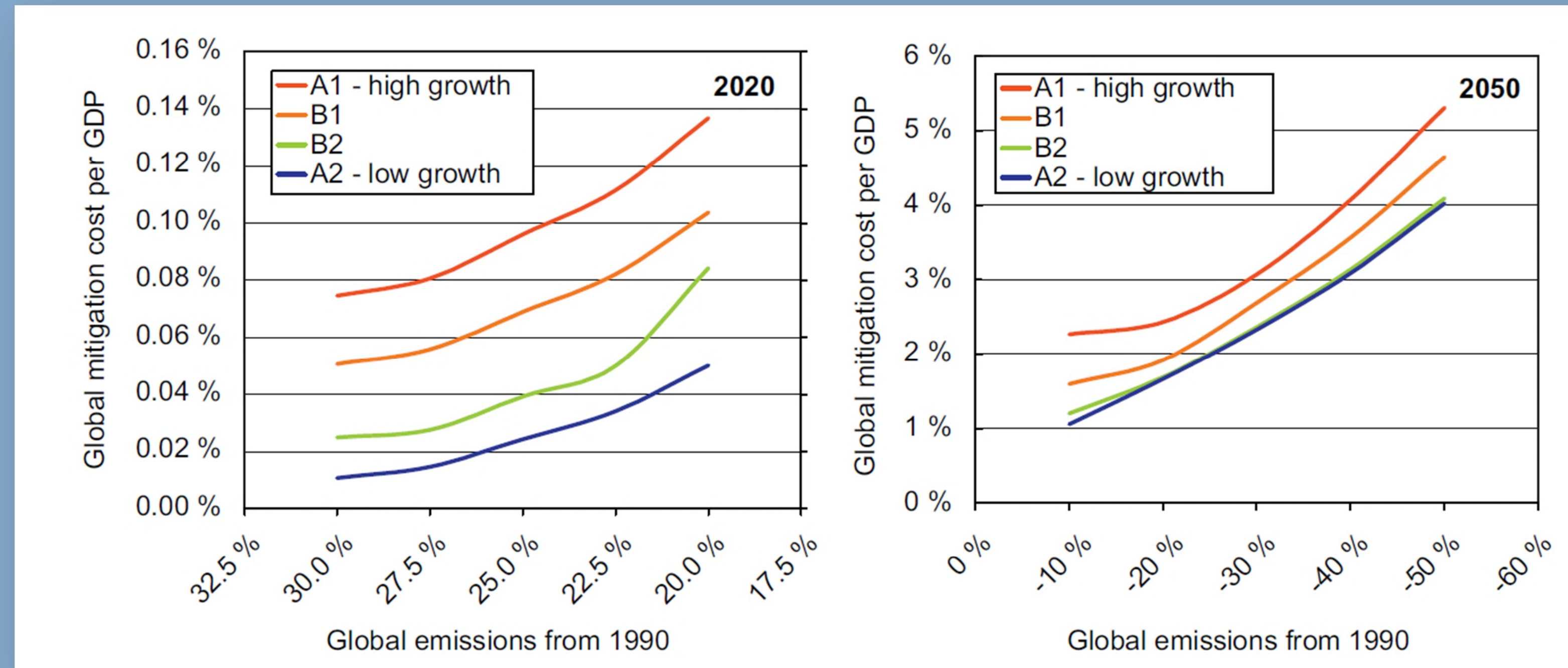
business environment in energy planning

renewable energy

establishment of future targets
management of production variability



determinants of household energy consumption in India: technology choice for a cost minimisation problem



global climate change: mitigation costs per GDP in 2020 and 2050, with different economic growth scenarios and emission reduction targets

selected publications

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- T. Ekholm, S. Soimakallio, S. Moltmann, N. Höhne, S. Syri and I. Savolainen: Effort Sharing in Ambitious, Global Climate Change Mitigation Scenarios. *Energy Policy*, 2010
- T. Ekholm, V. Krey, S. Pachauri and K. Riahi: Determinants of Household Energy Consumption in India. *Energy Policy*, 2010
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- E. Näsäkkälä and S.E. Fleten: Flexibility and Technology Choice in Gas Fired Power Plant Investments. *Review of Financial Economics*, 2005
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