Counterfactual analyses –
Energy efficiency in industry
Introduction

› Voluntary programme for improving energy efficiency in industries (PFE)

› Electricity tax exemption

› Has the programme contributed to outcomes in the form of better energy efficiency or reduced emissions?
Counterfactual analyses

› What effects would have occurred without the programme (PFE)?

› New calculations for energy use divided into three groups:
  – Companies participating in the first period of PFE (2005–2009)
  – Energy intensive industries not participating in the programme
  – Other industries

› Source: Statistics Sweden
  – Survey Industrial Energy Consumption
  – Extraction and manufacturing industries NACE 05-33
  – More than 9 employees
Validity and reliability

› Not exactly the same type of companies compared

› Hard to measure additionality

› Effects caused by several factors, for example the financial crisis and high energy prices

› Long term effects (available limited time series)

› A new supplement to the follow-up based on the involved companies own estimations
Small changes in electricity use by production value

Electricity use (GWh)/production value SEK million

- Companies participating in PFE
- Energy intensive industries not participating in PFE
- Other industries
Energy use per production value in PFE-companies has not decreased more than in other energy intensive companies
Lessons learned

› Specify definitions of categories

› A supplement to other analyses

› Calculate more time when new data and methods are used
Thank you for your attention!