



Smart Energy Networks: The Value Proposition

WATERLOO
ENVIRONMENT

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Research in Sustainable Finance

- Managing environmental and social credit risks
- Analysis and rating of the sustainability performance of corporations
- Financial performance of SRI Products
- Social- and Micro-Finance

Current Research

- How may the financial sector manage sustainability risks connected with their borrowers?
 - How to integrate the sustainability performance of different sectors into risk management processes?
 - How does the financial sector perform compared to other sectors?
- What is the impact of the financial sector on sustainable development?
 - How may the financial sector foster sustainable businesses?
 - How to measure the impact of the financial sector?

White Paper– Smart Energy Networks: The Value Proposition

- What are the benefits/costs/risks associated with SEN?
- Where do benefits/costs/risks of Smart Energy Networks accrue?
- Where are these benefits/costs/risks not valued?

Specific Elements

- Power to gas
- GHG reductions through SEN
- Thermal grids
- Mobility-energy distribution integration
- Energy and thermal storage

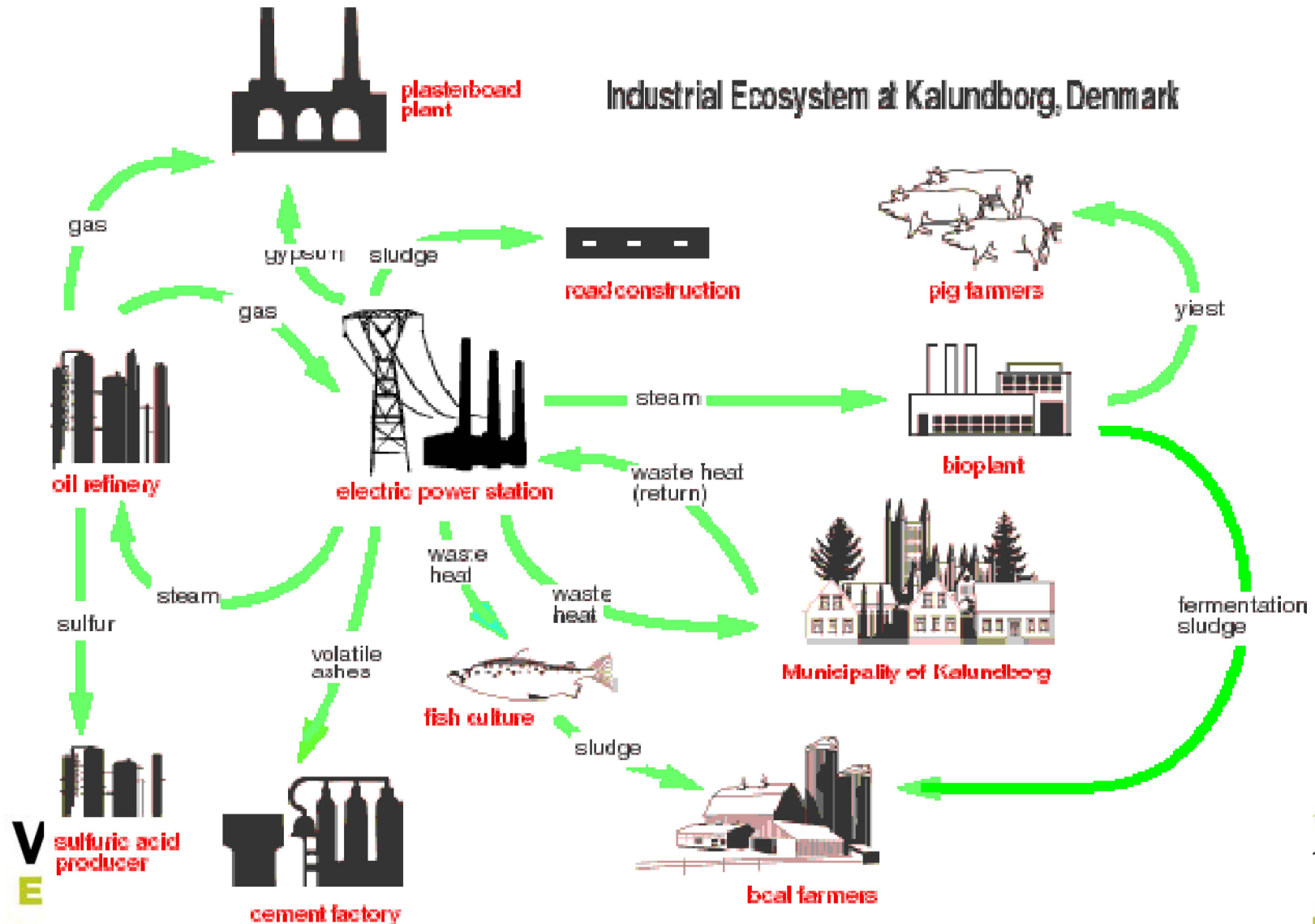
Stakeholder Approach

- Hard and soft costs/benefits/risks associated with
 - regulatory
 - industry
 - financial
 - technical factors
- Investigating valuation approach(es) and comment on societal net benefits

Hypotheses

- Business consequences
 - Businesses connected through SENs have to connect their activities to be able to fully benefit from SENs
 - Contracting will offer a way to benefit from SENs
 - Clients of SENs have to be connected to create a closed loop
- Risk Management
 - Based on portfolio theory we hypothesise that SENs are able to reduce risks (shortages, financial, etc.)
 - Future risks such as extreme weather events could create a value for SENs
- Internalisation of costs and benefits
 - Environmental and societal benefits such as GHG reduction have to be internalised to create a positive value for SENs

Connected Business



Schedule

- January and February: Literature Analysis
- February: Interview and Survey Guideline
- March: Interviews and Survey
- April: Report