#### Innovation programs for industry in Sweden

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## Program for Energy Efficiency (PFE)

- Objective: Increase energy efficiency in energy intensive industries.
- Energy intensive:
  - Costs for energy products and electricity total at least
    3% of company's total revenue and/or;
  - Energy, carbon and sulfur taxes on energy products and electricity used total 0.5% of value added

**Note:** Future of PFE is uncertain after 2014 No more applications accepted for the program.

## **PFE – Program Offerings**

- Tax exemption on electricity consumption for energy-intensive companies in manufacturing industry
- Resources, technical assistance and training from Swedish Energy Agency and associated experts
- Networking and workshops with other program participants



## **PFE - Requirements**

- Certification for a standardized energy management system
- Energy efficiency screening procedures for purchasing of high-consumption electrical equipment
- Energy audit listing energy efficiency opportunities
- Implementation of potential measures identified
- 5 years participation and reporting (2 years, 5 years)



#### **PFE - Results**

- Over 100 participating companies from sectors including:
  - Paper and pulp production
  - Glass production
  - Chemicals
  - Iron and steel production
- Over 1.45 TWh of energy saved (2012)
- Increased interest for energy efficiency measures in investment decisions



## **Strategic Innovation Areas**

- Newly launched program
- Areas defined by the Swedish Government after consultation with business, academia and public service:
- Areas include:
  - Mining and metals extraction
  - Industrial processes and automation
  - Biomass-based materials, products and services



#### **Strategic Innovation Areas**

• Approximately 500 miljon SEK per year in funding (54.5 million Euro)

• Applications for funding can be made by the private sector, research institutes

• Coordinated by public agencies, business groups and research institutes



# Experiences and reflections with innovation programs

- Industry-driven decision making supported by public agencies
  - Identifying opportunities and potential measures
  - Reporting and follow up
  - Long-term investment decisions
- Interaction with state aid rules, Energy Tax Directive, NER300
- Innovation as a part of broader debate on competitiveness

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