RES-H POLICY

Policy evaluation tools – Which criteria should be applied to evaluate different policy options?

Workshop"Improving the Policy Framework for Renewable Heating in Hungary"

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Background

- Policy support instruments can be assessed against quantitative and qualitative criteria
- Quantitative elements (via economic modelling), e.g.
  - future RES-H/C penetration rates
  - policy costs
  - economic benefits in terms of avoided fuel costs or employment
- Qualitative elements, e.g.
  - cost efficiency (short-term, long-term)
  - stakeholder acceptance
  - market interaction
  - distribution of costs and benefits
- Qualitative assessment is to a large extent based on system knowledge and experience

Qualitative evaluation criteria

Cost efficiency and transaction costs	Establish stable and reliable investment conditions
	Capability to support specific RES-H/C technologies
	Long-term perspective contributing to dynamic efficiency
	Avoiding over-incentivising (contributing to static efficiency)
	Transaction cost (contributing to static efficiency), especially public administration costs
	The ability to exploit administrative and organisational synergies at the interface to other related instruments (eg energy taxes)
	Incentive for efficient system operation (contributing to static efficiency)

source: www.res-h-policy.eu/downloads/qualitative_assessment_criteria_(D10)_final.pdf

Qualitative evaluation criteria

Acceptance	Policy sector (public authorities, policy makers)
	Building owners (small scale investors) and tenants
	RES-H/C system operators (large scale investors)
	RES trade associations
	Fuel suppliers and associations (conventional fuel)
	Media
	Experience from other countries
	Communication

source: www.res-h-policy.eu/downloads/qualitative_assessment_criteria_(D10)_final.pdf

Qualitative evaluation criteria

Market interaction	Level of market conformity
	Impact on competition
	Impact on market stability
Other	Provision for the "polluter-pays principle"
	The consideration of local characteristics
	Distribution of costs and social justness
	Contra-productive secondary effects
	The ability to avoid lock-in effects

source: www.res-h-policy.eu/downloads/qualitative_assessment_criteria_(D10)_final.pdf

Quantitative evaluation criteria

- Benefits
  - Growth in renewable heating capacity induced by a policy instrument
  - Overall investment volume in new renewable heating capacity triggered by a policy instrument
  - Avoided (fossil) fuel costs (-> often linked to reduced dependence on fuel imports)
  - Positive effects on employment, positive effects on regional economies
  - Reduction of greenhouse gas emissions
- Costs
  - Differential costs between a renewable heating installation and a "conventional" heating system
  - For financial support instruments covered by public budgets: overall funding costs
  - Public administration costs for managing and administering a support policy

Benefits: Growth in renewable heating capacity

- Economic support policies (e.g. investment subsidies) change the comparative situation of renewable technologies against conventional heating systems -> increase in RES-H diffusion rates
- Regulatory instruments such as RES-H use obligations do also influence the diffusion rate of different RES-H technologies
- Intensity of a policy (e.g. level of support) influences total capacity growth, availability of potentials/ressources might be a limiting factor
- Different support instruments might lead to a different technology mix (e.g. solar thermal, heat pumps, biomass; large vs. small)
- When estimating the effect of a support policy it must be considered that investment decisions often are not purely based on economic criteria (households vs commercial investors; non-monetary barriers)

Benefits: Avoided (fossil) fuel costs

- The use of renewables for heating purposes replaces conventional energy carriers (e.g. gas, oil, coal) thus usually leading to lower (fossil) fuel costs
- In the case of biomass this effect has to balanced against the fuel costs for biomass -> net avoided fuel costs
- For estimating the avoided fuel costs
  - the anticipated development of fuel prices is a key parameter (low vs high price scenario)
  - the fuel costs of a realistic non-renewable fuel mix should be taken as a reference (which heating system would have been installed without a support policy for renewable heating in place?)

Benefits: Employment effects

- Gross employment effects of RES-H result from the economic impact of the renewable heating industry and all other industries indirectly depending on it
- Negative employment effects (e.g. in industries linked to conventional heat generation) are not included (-> estimation of net employment effects requires macro-economic modelling)
- Input parameters for estimating gross employment effects:
  - overall RES-H investments (triggered by support policy) broken down to different technologies
  - technology-specific employment coefficients (ratio of employment in full time equivalents to value added (mio. EUR) for each RES-H reference technology

Benefits: Reduction of greenhouse gas emissions

- The use of renewables for heating purposes reduces greenhouse gas emissions since in many cases fossil fuels are replaced
- Potential trade-off: Depending on the technology applied an intensified use of biomass for heating purposes might lead to higher emissions of other air pollutants (e.g. NOx, SOx, particles)
- Estimation of reduced greenhouse gas emissions needs to be based on the emissions of a realistic non-renewable fuel mix (which heating system would have been installed without a support policy for renewable heating in place?)

Costs: Overall funding costs

- Financial support instruments aim to provide compensation for the additional cost of RES-H technologies compared with "conventional" heating systems
- In the case of public support (e.g. investment grants, soft loans) these public funding costs are one of the core parameters for assessing overall policy costs
- Overall funding costs can be subject to a cap (e.g. by law or budget constraints); if not limited overall funding costs mainly depend on the support conditions for the different RES-H technology options + RES-H diffusion rates
- Annual budget requirements depend on the way support is given (e.g. subsidy -> one-off payment; soft loans or bonus type of system -> payments distributed over fixed period of time)

Costs: Public administration costs

- Public administration costs involve e.g. costs that arise public authorities or experts who act on behalf of a public authority from the execution of a political measure (e.g. for administering a subsidy scheme)
- Public administration costs can be estimated based on some basic assumptions, e.g.
  - number of funding applications per year, number of supported installations
  - execution of the policy (e.g. which authorities will be involved, which procedures are assumed to be necessary, are there synergies with administering other policies?)
  - "efficiency" of programme execution (e.g. number of processed applications per day and staff)
- Assumptions should be based on experience with the execution of comparable schemes (if available)

Thank you for your attention

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