

BIO-COST: Impact of different national biomass policies on investment costs of biomass district heating plants

The BIO-COST project - co-ordinated by E.V.A. - was funded by the European Commission's THERMIE Type B Programme. The objective of BIO-COST was to analyse the impact of national biomass policies on the investment costs of biomass district heating (DH) plants. The European comparison should help identifying measures to reduce investment costs for biomass DH plants and/or components down to a "best practice" level.

The investigation is based on the comparison of 20 biomass DH plants by country, with Denmark and Sweden having mainly high energy taxes as driver, while Austria and France rely mainly on subsidy systems. The results of BIO-COST show, that governmental policies can have a big impact especially on grid and buildings costs, effecting of course the overall costs of the plant enormously. Emission standards have their effects especially on the costs for technical equipment, however, this fact was not reflected in the BIO-COST data.

The results do not show a clear advantage of either the energy tax approach or the subsidy approach: the French subsidy approach leads to fairly low cost levels compared to the Danish tax approach, while the Swedish tax approach seems to yield the lowest cost level. On the other hand the Austrian subsidy approach seems to increase investment costs. In principle both the tax as the subsidy approach can lead to the same effect: a project is calculated in such a way, that it just meets economic breakeven. This is typically the case when the project is not carried out by a private enterprise but by an operator aiming at enhanced public welfare (e.g. co-operative, municipality).

In this case a subsidy model might yield more possibilities to encourage an economically efficient development, than a tax. Instead of giving subsidies as a fixed percentage of investments they could be adjusted to the actual needs of the project as proven by a standardised calculation. Of course this can create the incentive to expect higher costs to justify higher subsidies. Monitoring of actual costs could prevent this problem.

The investigations also show that specific investment costs are closely related to the technical design of the plant. Applying strict technical criteria leads to high full load hours and thus decreases specific investment costs per heat produced. However, higher investment costs (e.g. for technical equipment) can also reduce the operation costs. Due to a lack of availability these costs were not analysed, but taken into account by forming different plant samples.

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Other identified measures for decreasing costs are: to provide organisational structures for professional training, standardised tender documents, increased quality of feasibility studies, European benchmarking, rigorous anti-cartel policies, organised advice for possible new operators, communication platforms for plant operators, model contracts with planners.

PROJECT-INFO

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- Impact of different national biomass policies on investment costs of biomass district heating plants

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- Federal Ministry of Transport, Innovation and Technology

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- dk-Teknik, Energy & Environment
- ADEME
- SVEBIO
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PUBLICATIONS

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