

CHP Guarantees of origin

Legal framework, implementation, and future usage



AIB Workshop
"Perspectives on Certification of Power Generation
in the light of the new EU Energy Policy"

Kempinski Hotel Budapest
March 13th 2008

Florian Leber
German heat and power association - AGFW e.V. -



The German Heat and Power Association – AGFW e.V.



- /// Around 360 utilities operating district heating systems, industrial companies, manufacturers and research institutes join the AGFW as members
- /// About 54.000 MW of the German heat connection load, the biggest of Western Europe, gets represented by the AGFW
- /// AGFW provides regulatory framework, e.g.: "FW 308" – calculation of CHP electricity
- /// AGFW cooperates with international district heating associations



AGFW 18th Special Trade Fair 2008



District Heating Technology 2008 and
Conference

"District Heating and CHP - a Strong
Partnership,,

8-10 April 2008

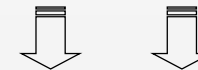
Bremen, Germany



CHP GoO: Legal Framework

CHP Directive

(Directive 2004/8/EC of the European parliament and the council on the promotion of cogeneration based on a useful heat demand in the internal energy market and amending Directive 92/42/EC)



Art. 5 - Guarantees of origin of electricity from high efficient cogeneration



Legal framework



“High efficient cogeneration“?

- Electricity from cogeneration
- Primary Energy Savings of 10% (small scale units just need savings) compared to separate production

Required: calculation of electricity from cogeneration

- Easy for plants with efficiencies of 75/80%
- Not so easy for plants which do not reach these values
- Actual guidelines provide no precise advice
- If member states calculate different, the number of certificates could vary even if two certain plants are constructed in the same way but are located in different countries



Legal framework



$$PES = \left[1 - \frac{I}{\frac{CHP E_{\eta}}{Ref E_{\eta}} + \frac{CHP E_{\eta}}{Ref E_{\eta}}} \right] \times 100\%$$

- CHP electricity is determined by Annex II of the directive
- If efficiency is below values of Annex II a, the power to heat ratio is required
- Not clear how to calculate C or “full cogeneration mode”

➔ Number of guarantees could vary



Implementation



- Competent body (one or more)
 - independent of generation and distribution activities
 - supervise the issue of the guarantee of origin
- Basis for the GoO are the harmonized efficiency reference values and the guidelines
- Member States shall ensure that the origin of electricity produced from high-efficiency cogeneration can be guaranteed according to
 - objective
 - transparent
 - nondiscriminatorycriteria laid down by each Member State



Implementation



The guarantee of origin shall cover:

- Lower calorific value of the fuel source
- Use of the heat generated
- Date and place of production
- Quantity of electricity from high efficient cogeneration
- **Primary energy savings (PES)**
- Additional information (member states decision)



Future usage of GoO

For industry:

- Trade certificates
- Market necessary as e.g. for green certificates
- "green image"

Governmental policy:

- Can be used to implement a CHP quota
- Existing support schemes?
- EU?

Need to be solved:

- Renewables used in CHP
- Indicative target for CHP market share (18%)
- Support scheme for district heating/cooling networks → If there is no heat sink there will be no more CHP plants



AGFW



Thank you for your attention!



Contact:
Florian Leber
Stresemannallee 28
60596 Frankfurt, Germany
f.leber@agfw.de
<http://www.agfw.de>



AGFW

