

www.aebiom.org

The Enplus certification GHG calculation for wood pellets

Cristina Calderon calderon@aebiom.org

Heidelberg, 23 October 2012 Biograce II





- AEBIOM
- EPC
- EnPlus certification
- ENPlus sustainability assessment
- Pellets GHG emissions calculation





About AEBIOM European Biomass Association

- Based in Brussels in the Renewable Energy House
- Member of EREC (European Renewable Energy Council) and WBA (World Bioenergy Association)
- Represents and promotes interests of bioenergy stakeholders
- 30 national associations / 80 associated companies
- Activities: lobbying, workshops, newsletters, European projects, working groups, conferences and networking, etc.







- Represent the interest of the European Wood Pellet sector towards the EU institutions
- Members are national pellet associations or related organisations from 16 countries
- Including observers from US, Canada and Japan, soon Brazil
- Platform for the pellet sector to discuss the issues that need to be managed :standardisation and certification of pellet quality, safety, security of supply, education and training, and the quality of pellet using devices
- Coordination of the **ENplus certification**

www.pelletcouncil.eu



ENplus pellet certification

- Quality certification based on EN 14961-2 for residential pellets, coordinated by EPC
- Ensures consumer confidence
- Including both production and bulk trade
- Huge simplification of trade, one label for Europe
- Currently being expanded to industrial grades and more sustainability criteria
- Handbook developed by the pellets sector, adaptable to market needs





ENplus market uptake

- Great success in the heating market!
- Germany: 900.000t certified pellets production, 400.000t pellet trade
- Austria: 500.000t pellet production; 150.000t pellet trade
- UK: 150.000t certified pellets
- ES: 100.000t certified pellets
- ENplus producers and traders in: AT, BE, CA, CZ, DE, DK, ES, FR, HR, IT, LT, NL, RO, UK
- Over 3 Million tons of ENplus pellets production capacity
- About 2 Million tons actual pellet production in 2012
- Actively implementing countries: AT, CH, DE, ES, IT, LT, PT, UK
- More interest from Europe, North America and Asia





ENplus pellet certification



Initial inspection of production

- Raw material: classification of the origin and sources of solid biofuels in accordance with EN 14961-2
- Type, exact description and quantity of additives if they are used.
- Type and suitability of the raw material storage
- Production plant: suitability of the technical facilities
- Quality management system: in-house manual and/or operating instructions, training records (external and internal), handling of calims and complaints, etc.
- Self-monitoring of production, suitability and condition of the testing devices, reference sample management.

Product quality



ENplus pellet certification



Initial inspection of production

 Certified producers have to document the origin of the raw material and inform the inspection body at the yearly audit regarding the share of raw material coming from certified sources (FSC, PEFC or equivalent systems). The inspection body integrates this information in the audit report.

Sustainability requirements

ENPlus sustainability assessment:

Sustainability principles for the sourcing and trading of wood pellets in Europe with the EN Plus label (residential and industrial)





Enplus sustainability assessment

EN Plus SUSTAINABILITY PRINCIPLES						
Principle 1: GREENHOUSE GAS BALANCE (GHG) The greenhouse gas (GHG) savings along the entire life-cycle, taking into account the whole supply chain including production, processing, transport and end-use are at least 60% with respect to reference fossil fuels						
Principle 2: CARBON STOCK						
Principle 3: BIODIVERSITY						
Principle 4: PROTECTION OF SOIL QUALITY						
Principle 5: PROTECTION OF WATER QUALITY						
Principle 6: PROTECTION OF AIR QUALITY						
Principle 7: COMPETITION WITH LOCAL BIOMASS APPLICATIONS						
Principle 8: LOCAL SOCIO-ECONOMIC PERFORMANCE						
Principle 9: ETHICS						



Pellet GHG emissions calculation

GHG calculation will be included in audit report and needs to be sent to national association as well.

- Transport of the raw material
- Processing for the production of the wood pellets (electricity use, fossil fuels use)

System boundary



Pellet GHG emissions calculation

	[gCO2-eq]/ kg Pellets						
plant	D	Α	Α	Lat	Α	F	F
capacity	12.000	30.000	15.000	10.060	7.576	28.000	40.000
ncv	18,6	18,6	18,6	18,6	19,0	17,2	19,0
Transport / biomass supply	0	1	2	0	2	38	2
Pellets production - electricity	20	0	0	0	11	5	26
Pellets production - consumed heat	0	236	0	0	-7	0	0
Pellets production - additives	6	6	6	0	14	0	0
Packaged delivery	0	0	0	5	0	8	0
Total emissions	26	243	8	5	35	51	28
GHG-reduction HFO	98,4%	84,6%	99,5%	99,5%	97,9%	97,1%	97,1%

Ofi results (presented by Martin Englisch)

Differences - why?

UROPEAN BIOMASS ASSOCIATION

- Tranport of the raw material may contribute to > 50% of total CO2 emissions → Big advantange for plants connected with saw mills
- Electricity: depends on supplier and country, can be influenced.
- Heat: very often from biomass plants = 0. Use of fossil fuels has very large impact.



Conclusions

- CO₂ emissions of pellet production is very small compared with all fossil fuels
- •There is potential for CO₂ emission reduction. 7 plants presented have emissions of ~ 10.000 t CO₂eq per a

•Calculation tool → very simple approach. Intended to be used by non-experts.

Thank you for your attention

Cristina Calderón calceron@aebiom.org