Template for comments

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TABLE FOR COMMENTS

Name of submitter: _ Thomas Grammig _

Affiliated organization of the submitter (if any): _ independent _

Contact email of submitter: _ trgram@compuserve.com _

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#	**Para No./ Annex / Figure / Table**	**Line Number**	**Type of comment** ge = general te = technical ed = editorial	**Comment** (including justification for change)	**Proposed change** (including proposed text)	**Assessment of comment** (*to be completed by UNFCCC secretariat*)
1	**3 (b)**		ge	**The** key step toward usability by removing a constraining part of AM0014. "is planned" should be interpreted as referring to conditions of production determining the heat usage and allowing flexibility in which hours of a day, which days of the week and which weeks in a year those condition of production occur. Neither should, "is planned" require fixing how many hours per year xy power is supplied to the grid. Many changes in production through raw material supply or demand/price for the product are unforeseen and there seems to be no relation between such changes and environmental integrity. An effective form of "is planned" can be the annual average ratio of electricity delivered to grid, kWh per unit of production. The same can be used for heat (3.a) supplied to heat networks. It is indeed more important for usability of a cogeneration methodology to remove the emission reduction crediting limit for electricity because most cogeneration systems are designed to follow the heat demand variation. But still, keeping the emission reduction crediting limit for heat exported (3.a) will continue to exclude important cogeneration configurations. So removing this heat crediting limit should be the next step for simplification and streamlining.		
2	**3 (d)**		ge	Heat-to-power ratio > 1, is not a relevant applicability condition. Few engines can get close to 1 (by using turbo chargers), and there is no relation between this parameter and environmental integrity. Gas or steam turbines do not operate near 1 in practice. If 3(d) is intended to exclude certain fuel cells, it can be removed since these are not commercialised. The heat-to-power ratio is lower for engines below 10 MW and these tend to have higher specific investment costs. I cannot find a reason why a diesel engine configuration with heat-to-power of 0.9 (rare but realistic) would require		

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				any particular analysis or scrutiny. The german cogeneration subsidy regulation (KWK Gesetz 2009) includes a bonus subsidy for lower heat-to-power ratios ('Stromkennzahl' is the inverse of heat-to-power) so as to provide an incentive for the higher investment involved. This bonus would not exist if operators could achieve a higher IRR with engines with a lower heat-to-power ratio (the EU directive 2004/8/EC uses overall cogeneration efficiency). Finally, because of 3 (b) cogeneration systems with heat-based operations are more likely to be chosen and for those, the heat-to-power ratio is not lower.		
3	**4 (a)**		ge	"All recipient facilities" should refer to the heat using facilities and not to facilities with electricity supplied from the grid. This relates to the distinction known users / unknown users by MP63 in the Appendix for AM0048 (I commented on 31 May 2014 to that call for inputs, maybe I can only refer here to #2 and #3 of that input). ACM00XX is intended to be more restrictive than AM0048 by not allowing unknown users, however "unknown" is not a precise criterion for cogeneration technology. "Unknown" can also have important consequences by excluding business models of PPs. The definition of recipient facilities (f) page 6, would imply that all facilities using electricity from the grid that gets the cogenerated electricity must be known. This is not realistic and also misleading physics, stating to which facility connected to a power grid electricity would flow. If ACM00XX is intended to allow electricity delivered to the public grid, indeed required to ever become widely usable, 4.a must be improved. Identifying recipients of cogenerated electricity from a grid prior or during the PA, can be removed with no effect on the accuracy of ACM00XX. In particular, identifying these recipients can not contribute to prevent gaming the investment analysis and would only counteract the key step toward usability (3.b).		
4	**4 (a - c)**		ge	Instead of daily/seasonal variations for recipient facilities to be presented in the PDD (4.c), it is more realistic and practicable to document these variations for the sources of electricity and heat. This would reduce the volume of data required and concentrate on those conditions that are relevant for the economics of the PA. Some recipient facilities might not be able to document this variation and there is no additional insight gained since only the aggregate of all heat		

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				recipients and the aggregate of all electricity recipients influence the efficiency of cogeneration technologies. There is a level of redundancy between 4.a, 4.b and 4.c. If both changes suggested, 4.a referring only to heat recipients and 4.c only to sources (not recipients), are considered this reduced redundancy seems to be realistic. The redundancy of 4.a, 4.b and 4.c should also be considered in light of the applicability condition 3.b, as only electricity supplied to the grid is credited but not exported heat, then the project activities are designed to follow the aggregate heat demand variation. Therefore, PPs run the cogeneration installation providing the heat load and change the electricity generation within the technically feasible range taking into account especially time-of-day variations of the feed-in tariff. In countries with fully liberalised power markets, large cogeneration installations typically have load schedules determined several days or weeks in advance, following power prices (what ACM00XX can accommodate with no risk). With 4.a and 4.b, a DOE can ascertain that the average annual heat production monitored corresponds to the assumptions in the additionality assessment. Further information (daily variations etc.) about the heat variation is not relevant for ACM00XX because periods with higher heat loads will be covered by auxiliary fuel in the heat recovery boilers which in all cases reduces the overall efficiency so all PPs minimise this. If new electricity users, not known prior to the project activity, are included, this cannot affect additionality. Important for the additionality assessment is only that the assumption for electricity supplied to the grid, based on the assumed heat-to-power ratio, is not reduced to lower the IRR. There are two solutions to this problem, include a list of default heat-to-power ratios (for technologies and steam conditions) that must be used in the additionality assessment, or second, verify that the average electricity generated is not more than 20% above the average electricity generation in the additionality assessment. The 20% is necessary to allow possible differences between maximum thermal efficiency, maximum heat efficiency and maximum power generation efficiency (that PPs have varying reasons to maintain during specific periods). The highest overall efficiency of the cogeneration installation is not the highest		

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				electricity generation (for a given heat load). It is only relevant to know if the average electricity generation is higher than that in the additionality assessment or not. All other parameter variations (steam conditions, flows, etc) can not be changed or decrease overall efficiency. If the above is correct (follows from 3.b) and these are the only reasons for imposing 4.a, 4.b and 4.c, then it seems possible to eliminate 4.a and 4.c since 4.b alone is sufficient.		
5	**25 (a)**		ge	This ratio should not be considered in the sensitivity analysis because it is not an independent variable. All PPs choices of a cogeneration system are constrained by a ratio technologically feasible dependent on overall demand variations of power and heat. There is no link between environmental integrity and the +/-10% range. Extraction/condensing steam turbines are used to change this ratio more during periods of the year. Additionality assessment uses yearly averages only.		