



08/07/2013

Preparatory Studies for Product Group in the Ecodesign Working Plan 2012-2014: Lot 8- Power Cables

Kick-off meeting with stakeholders

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Agenda

- » Study Team, tour de table
- » Introduction
- » MEErP in a nutshell
- » Planning
- » AOB



EC policy officer & VITO Study Team

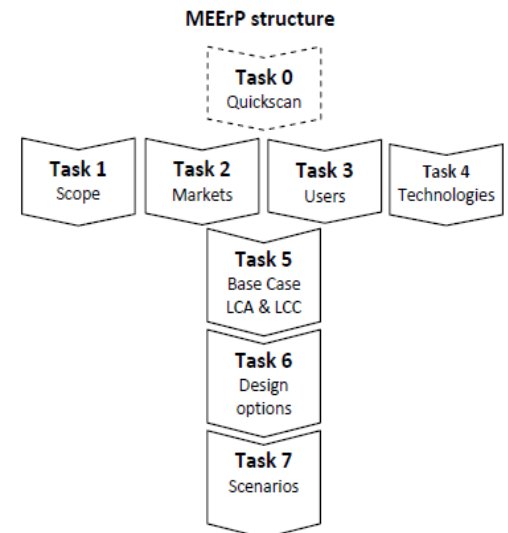
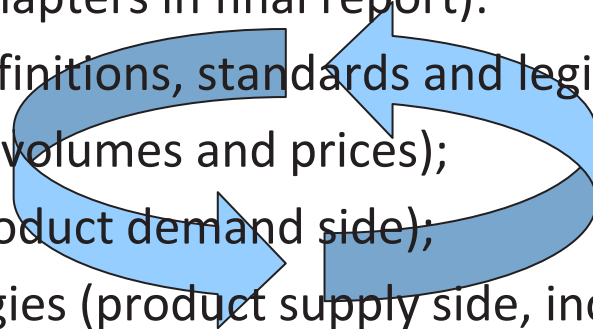
- » EC policy officer: Cesar Santos
- » VITO Preparatory Study Team:
 - » Arnoud Lust: Contract Manager: Arnoud Lust (FC ENTR/29/PP/FC Lot 2) and FC DG ENER Lot 1
 - » Main author power cables study&coordinator: Paul Van Tichelen
 - » Co-authors:
 - » Dominic Ectors (market and use data, ..)
 - » Marcel Stevens (technical standards, ..)
 - » Karolien Peeters (LCA, MEERp and scenarios, ..)
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 - » Website: Karel Styns (webmaster).

Introduction

- » Background is the Ecodesign Directive 2009/125/EC:
 - » Framework Directive
 - » binding requirements through 'Implementing Measures' (EC Regulation ..)
 - » For products but it is possible to introduce information requirements for components and sub-assemblies
 - » Product groups are first identified in a Working Plan, such as power cables in the 2nd working plan year 2012-2014
 - » A preparatory study provides the necessary information to prepare for the next phases in the policy process, a.o.: impact assessment, the consultation forum, ..)
 - » Approach of preparatory study is well defined in the Methodology for the Ecodesign of Energy-related Products (MEErP)
 - » Further info: http://ec.europa.eu/enterprise/policies/sustainable-business/ecodesign/index_en.htm

MEErP in a nutshell

- » Tasks in MEErP (chapters in final report):
- » Task 1 - Scope (definitions, standards and legislation, first screening);
- » Task 2 – Markets (volumes and prices);
- » Task 3 – Users (product demand side);
- » Task 4 - Technologies (product supply side, includes both BAT and BNAT);
- » Task 5 – Environment & Economics (Base case LCA & LCC);
- » Task 6 – Design options;
- » Task 7 – Scenarios (Policy, scenario, impact and sensitivity);
- » Tasks 1 to 4 can be performed in parallel



Task 1 Scope

- » **Identify relevant Prodcom/ EN&ISO/ Labelling categories > Stakeholder input!**
 - » Define preliminary product scope, definition, primary ("functional unit"):
 - » E.g.: power loss per meter (W/m) in day time load
 - » Define secondary performance parameters:
 - » E.g.: CSA, Conductor material(Cu, Al), Insulation, power factor, ..
- » **Test standards, also under development > Stakeholder input!**
- » **Legislation, per country > local grid codes or country specific installation codes .. > Stakeholder input!**
- » First screening > Stakeholder input > see also working plan but will be updated (Eurocable input welcome)
- » >Scope issue:
 - » Indoor low voltage power cables (see working plan)
 - » And/or Outdoor power cables (LV?, MV?, HV?)

Task 2 Market Data

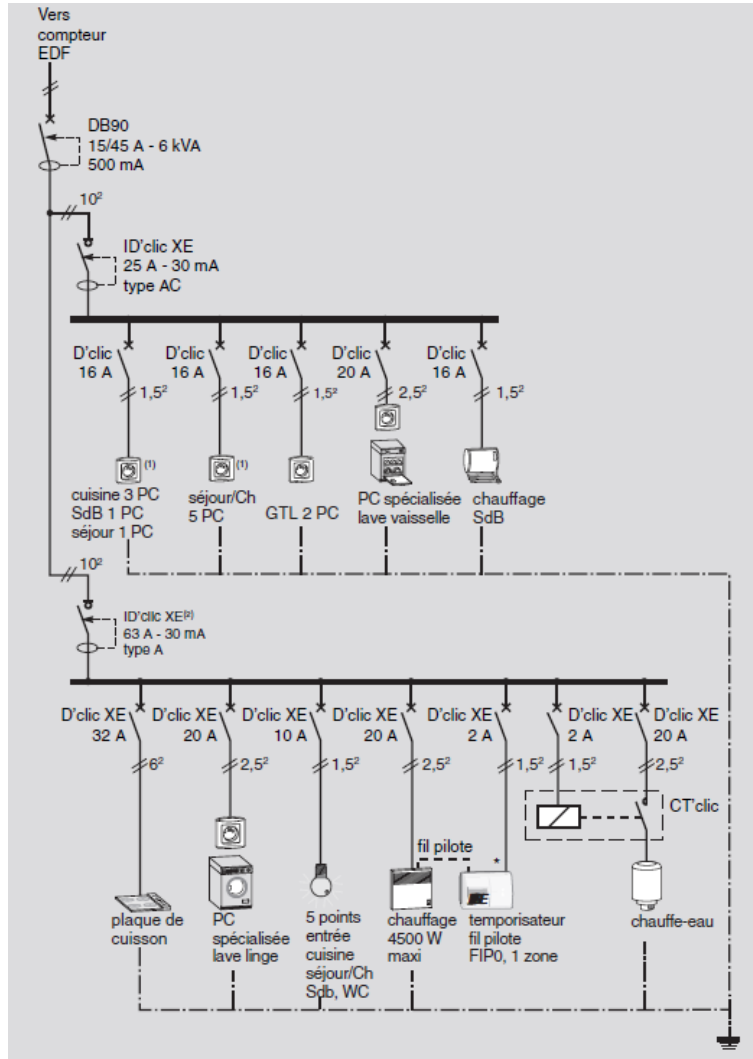
- » Generic economic data (.. Eurostat?)
- » Market and Stock data > **enquiry to stakeholders .. Compatible with categories & in task 4 'Base Cases', confidentiality & aggregation needed?**
- » Market trends
- » Consumer expenditure base data
- » Recommendations (.. Scope, barriers&opportunities)

Task 3 Users

- » **System aspects:**
 - » **ErP with direct**<> impact ErP with indirect impact<> ErP with direct + indirect impact
 - » Indirect: internal heat gains in buildings or cooling..
 - » **use phase energy consumption .. Cable losses**
 - » .. will be very similar to transformers, e.g. impact power factor, harmonics, operational temperature&insulation, load profiles
- » **End of Life behaviour**
- » **Local infrastructure (barriers & opportunities),** e.g. cable bending
- » Recommendations

Country specific differences DIN vs AREI

France: La norme NF C 15-100 dans l'habitat



AREI: Belgium

Doorsnede van de geleider [mm ²]	Nominale stroom van de smeltveiligheid	Nominale stroom van de automatische schakelaar
1,5	10 A	16 A
2,5	16 A	20 A
4	20 A	25 A
6	32 A	40 A
10	50 A	63 A
16	63 A	80 A
25	80 A	100 A
35	100 A	125 A

TEHALIT

525 Spannungsfall



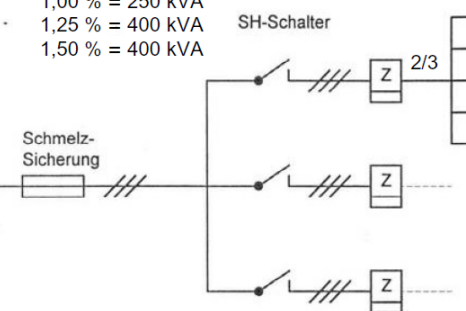
Tabelle 2 – Maximal zulässige Kabel- und Leitungslängen l_{max} bei einem Spannungsfall von 3 %

Betriebsstrom A	Maximal zulässige Leiterlänge				
	1,5	2,5	4	6	10
6	92	150			
10	55	90	141		
16	34	56	88	132	
20	28	45	70	106	
25		36	56	85	142
35			40	60	101
40				53	89

DIN VDE 0100-520 insgesamt 4 %

TAB 2000
Hausanschluss Zählerplatz

- 0,50 % = 100 kVA
- 1,00 % = 250 kVA
- 1,25 % = 400 kVA
- 1,50 % = 400 kVA



- Drehstromkreise, Nennspannung der Anlage 400
- für Einphasen-Wechselstromkreise sind die Längen dem Faktor 0,5 zu multiplizieren.

Task 4 Technologies

- » Technical product description
 - » Existing products.. **Working towards 'Base Cases'** (=conscious abstraction of reality' ..has to fit with previous tasks & workable model)
 - » Improvement options: **BAT&BNAT**
- » **Production, distribution and end&of&life** > BOM > Ecoreport format&tool
- » Recommendations

Task 5-7

» **Task 5: Environment Economics**

- » Base Case Environmental Impact Assessment(EcoReport Tool)
- » Base Case Life Cycle Costs for consumer
- » Base Case Life Cycle Costs for society
- » EU wide impact

» **Task 6: Design options**

- » .. Identify LLCC & BAT > target levels & benchmark values
- » .. Long term potential& system analysis

» **Task 7: Scenarios**

- » Policy analysis

Task 7 Scenarios

- » Task 7: Scenarios
 - » Policy analysis
 - » Scenario analysis unit stock/sale & environmental
 - » Impact analysis (socio) economic
 - » Sensitivity Analysis
 - » Summary

Note: MEErP 2011 is not an automatic law making procedure; the preparatory study is an analytical document at the responsibility of the contractor. Political and legislative choices, at the responsibility of the Commission, are indispensable in the follow up.

Planning (preliminary)

- » 28 Jun 2013 ■ Project kick-off meeting with EC
- » mid Jul 2013 ■ Launch website www.erp4cables.net
- » End Aug 2013 ■ Launch first series of enquiries to registered stakeholders
- » End Nov 2013 ■ 1st stakeholder meeting on Draft Task 1-3
- » End May 2014 ■ 2nd stakeholder meeting on Draft Task 1-5
- » Early Nov 2014 ■ 3rd stakeholder meeting on Draft Task 1-7
- » End Feb 2015 ■ Publication Final Report Task 1-7

Questions & Conclusion

- » CENELEC contact, Jens Erdmann?
- » Scope:
 - » Indoor low voltage cables?
 - » Outdoor low voltage cables, medium voltage, high voltage?
- » Stakeholder involvement, it is recommended to register at the website. Meeting participants will be registered automatically.
- » Questions, AOB?