1 Document Number: **SGCG_Sec0030_DC**

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12   **SGCG Report**
13   **Programme of standardisation work for the Smart Grid**
14   **v1.2**
15   **2011-11-30**

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17

Status of this version v1.2

19 This release has now circulated to the main stakeholders, and integrates in Annex E, for information, the
20 main comments SGCG received so far.
21 These comments will now enter a resolution process. The conclusions of this process will be progressively
22 reflected in the core part of this report.
23 Please note, that this report will be the basis for managing and following-up the standardisation tasks, and
24 for that purpose will be updated on a 3 months period

25

Status of the previous version v1.1

27 This release is the first complete draft release of the working programme, based on the best forecast
28 available at that date.
29 This is a tool not only to co-ordinate standardisation action plan in order to fill the selected gaps the soonest,
30 but also to monitor and help reporting on the following-up of the attached standardisation actions and
31 deliverables.

32
33
34 Comments should be sent to:
35 Laurent Guise : laurent.guise@schneider-electric.com,
36 convenor of the sub-group "First set of standards" - FSS
37 reporting to the SGCG.

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41

42 # Contents
43

101

102 # Reference documents

103 • (1) : M/490 EN - Smart Grid Mandate - Standardization Mandate to European Standardisation
104   Organisations (ESOs) to support European Smart Grid deployment;
105 • (2) : Final Report of the CEN/CENELEC/ETSI Joint Working Group on standards for smart grids
106   V1.12 approved by the CEN/CENELEC/ETSI Joint Presidents Group (JPG) on 4 May 2011, and by
107   the individual ESOs by 2011-06-05.
108 • (3) : Final Report of the SGCG Report - Standardisation Gaps Prioritisation for the Smart Grid - v2.1
109   date : 2011-10-19.
110

111 # Executive Summary

112 This report aims to answer the M/490 mandate second delivery, i.e the programme of standardisation work,
113 proposed to fill the main standard gaps mentioned in section 7 of the (3).
114
115 As a reminder these gaps selection results from a large survey CEN-CENELEC-ETSI conveyed to all
116 members of the Smart Grid Coordination Group. Results of this survey showed a quite good alignment of the
117 stakeholders view. Final gaps ranking and gaps selection were summed-up in the report (3), which circulated
118 to all stakeholders, and was finalised and approved at the Oct 7th 2011 SGCG plenary meeting.
119
120 This document aims not only to describe the work program, but also to offer a tool for monitoring and
121 reporting of all these actions.
122 It will also enable capturing/following-up the new needs for standardisation resulting from the re-assessment
123 of smart grid market needs.
124
125 Each set of standardisation works, focusing on one selected gap, is described using the same template
126 specifying :
127 • The gap to be filled, and its reference to the JWG Smart Grid Standard report (2)
128 • The standardisation bodies involved in filling the gap
129 • The leader name
130 • The standards considered in this work package, with their expected impacts, and associated status
131 • The plan of actions associated with the work package, including title, initial forecasted completion
132   date and updated one, in order to monitor the following-up of the gap filling
133
134 As a work management tool, the SGCC FSS team is proposing to provide an update of this document on a 3
135 months basis.
136
137 The establishment of this work programme provides a unique overview of Smart Grid related standardisation
138 activities, together with a mean to ensure the consistency and completeness of the standardisation work
139 under focus.
140 At that stage, **the work programme includes the revision of 20 standards, and the creation of 29**
141 **standards**.
142
143 These figures will vary, during time, mostly due to the fact that further refinement of the requirement will lead
144 to further identification of impacted standards, especially in the case of standards which are formed of series
145 such as CIM or IEC 61850.
146

147 List of selected gaps, as the target of the work programme

148 1.1 Standardisation work programme focus

149 Here is just an extract from section 7 of SGCG Report - Standardisation Gaps Prioritisation for the Smart
150 Grid (3).

151 For an easy reading, we have kept the numbering of gaps as it was in (3), as well as we have kept the
152 identifier of the gap as refered in (2).

153 For a more efficient management of the gap, we merged the gaps Gen4 and Gen-5 into one only.

154

Gap nb ref (3)	ID ref (2)	Gap summary (more details available in Annex A)
9	Gen-2 SM-1 Ind-1	(Revenue metering) Harmonisation between IEC 62056-XX (DLMS/COSEM) data model and IEC 61850/CIM
10*	Gen-3 Ind-2 HB-2	Extended field data modelling standard (part of IEC 61850) to support demand response, DER, VPP and home/building/industry automation Unified language for tariff information (for demand-response)
8	Gen-1 Dis-2	Harmonized glossary, semantic & modelling between back-office applications (CIM)) and field applications (IEC 61850))
18	Dis-4	Develop Cyber-security around IEC 62351
11-12	Gen-4 Gen-5	Standard to allow all connected generators associated in VPPs to participate to new ways of operating grid Standard for electrical connection and installation rules to ensure energy availability and security, in presence of high ratio of DER
26	Other-1	Smart Grid communication standards relying on the Internet based standard Web Services & harmonisation with CIM and IEC 61850
17	Dis-3	Seamless communication between control centre and substation
16	Dis-1 Dis-7	Feeder and Advanced Distribution automation
3	Com-2	Harmonize activities on data transport technologies
22	SM-3	From Smart metering to Smart Grid, and e-mobility
23	Ind-3	Smart metering data to building system interface
25	Ind-5	Electrical installation allowing DER installation
5	EMC-1	Review existing standards (EMC)
6	EMC-2	Review EMC and Power Quality levels
7	EMC-3	Consider distorting current emissions from DER equipment

155

156 1.2 Other gaps considered under the work programme

157 A specific focus is also given to some other gaps which are listed in the report (3) section 4.2 (i.e. the
158 complete list) to comply with the notes expressed in the section 7.3 of the same report.

159

160 The extra-list of gaps which is considered further is:

Gap nb ref (3)	ID ref (2)	Gap summary (more details available in SG report V1.12) All gaps may not be 100% in the exclusive scope of M490, however may not be excluded at that stage.
27	Other 2	(Revenue metering) Harmonisation between IEC 62056-XX (DLMS/COSEM) and other standardised (or on-going to be) revenue metering data model such as Meters&More, OSGP
27	T1	HV-DC grid architecture

161

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* The group decided to remove from the initial target, "Extended CIM to model more accurately Generation Fleet Management Applications in the case of Bulk Generation, and to integrate DER and VPPs" considering that the link with the gap 10 was very light, and in addition that this work is already launched at IEC level, with not real added value of the European bodies as such.

162 Work programme dashboard template

163 One of the first activity needed to establish the work programme consist in defining a common template for
164 any gaps, not only to break down all the tasks to reach the target, but also getting a tool for monitoring the
165 achievement over time.
166
167 The proposed template **presented in more details in Annex B** contains the information below :
168
169 • The gap to be filled, and its reference to the previous report (2)
170 • The standardisation bodies involved in filling the gap
171   o The body can be a European one , such as CENELEC, CEN or ETSI, but also an
172   international one such as IEC.
173   o As much as possible we gave the preference to international one, as soon as we didn't
174   identify specific values of making the work at European level
175 • The leader name
176 • The standards considered in this work package, with their expected impacts
177   o These standards are de facto managed by on the bodies mentioned above
178 • The actions associated with the workpackage, in order to monitor the following-up of the gap filling
179   o One criteria was to get monitorable action (i.e the deliverable is identified, and then only two
180   states of the action is proposed Open, as soon as the action as started, closed, when the
181   ecpected delivery is effectively delivered)
182   o The date which are indicated in the matrix are using the following editorial rules:
183   ▪ If the date is not confirmed by the standardisation body yet, then the date will
184   explicitly include "(guess)" as a suffix
185   ▪ When the date is really committed through the work programme of the
186   standardisation body, then it will be indicated in bold.
187   Please note that this rule is **currently not applied in the rest of the document**. This will be
188   done for the next release of this report. Most of the dates indicated here are the best
189   forecast given by the leaders, generally picked from the work program of the concerned
190   bodies when this was available.

191 Work programme dashboards

192 In order to make the reading of the document easier, **all detailed work plan dashboards are put in**
193 **Annex D**, at the end of the report.
194
195 **Important notice :**
196 It is important to consider that **these dashboards are still work documents**, because of the absolute need
197 to follow the internal processes of the concerned standardisation bodies.
198 It will become "committed" as soon as these technical bodies officially validate them, by the formal
199 integration of these works in their programme of work.

200 Work programme timetable summary

201
202 Here is a graphic showing the main deliverables of each "gaps", and the main stage gate, up to completion.
203 For each gaps, 3 main phases may be considered :
204 • A prestudy phase, including possibly requirement gathering, technical prestudy. This phase is
205   usually needed to define **what** has to be standardised -> coded in blue in the matrix below
206 • A draft phase, including the writing of the first technical proposal. This phase usually delivered a CD
207   draft, or a DC document -> coded in dark green in the matrix below
208 • A standardisation phase, where this technical draft will come through the standardisation process to
209   get the comments and then approval from the concerned stakeholders -> coded in light green in the
210   matrix below

SGCG Report on Standardisation Gaps Prioritisation for the Smart Grid; v1.2; 2011-11-30

		Update date			8-Nov-11	2011		2012				2013				2014	
						Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2 Q3
Gap Nb	ID	Gap summary	R	C	Leader												
9	Gen-2, SM-1	Revenue metering data harmonisation DLMS/COSEM vs IEC 61850/CIM	1	3	T. Schaub												
10	Gen-3, Ind-2 HB-2	Demand-Response data modelling (Smart		1	P. Ferstl												
		VPPs data modelling (Smart users)	1	2													
8	Gen-1 Dis-2	CIM-61850 data model harmonisation		3	L. Guise												
18	Dis-4	Develop Cyber-security around IEC 62351	8	3	JP Mennella												
11-12	Gen-5 Gen-4	Connecting DER - electrotechnical rules	4	3	S. Volut												
		Connecting DER - electrotechnical functions		1													
26	Other-1	Migrating to web-services		2	L. Guise												
17	Dis-3	Seamless communication between control centre and substation		1	P. Lhuillier												
16	Dis-1 Dis-7	Feeder and Advanced Distribution automation		2	José Manuel Inchausti												
3	Com-2	Harmonize activities on data transport technologies	1	2	John Newbury												
22	SM-3	From Smart metering to Smart Grid, and e-mobility		1	C. Andersen												
23	Ind-3	Smart metering data to building system interface		1	David Johnson												
25	Ind-5	Electrical installation allowing DER installation		1	E. Tison												
5	EMC-1	Immunity test method and requirements	2	1	C. Imposimato												
		compatibility levels and emissions limits		1													
6	EMC-2	Review EMC and Power Quality levels	3		H. Rochereau												
7	EMC-3	Consider distorting current emissions from DER equipment		1	C. Imposimato												

pre-study
draft
standard

212

Work programme follow-up

214 This report is not only providing a standardisation work programme start, but will also be **updated on a 3**
215 **months basis** to ensure that the objectives are reached and that planning are sticking to the original targets.
216
217 This report will be also updated to reflect the addition of new gaps, resulting from the re-assessment of the
218 Smart Grids standards set, as mentioned in the M/490 mandate - ref (1).
219

221   (extract from **JWG Report on Standards for the Smart Grid; v1.12)**

A.1   Product Classification, Properties and Documentation

223   **PPC-1 Electronic Data models**
224   Align glossaries as much as possible with Electronic Data Models (TC57/SC 3D)
225

A.2   Data communication interfaces

227   **Com-1: Further develop power/distribution line communication**
228   Follow the recommendations of the SMCG Technical Report, which already contains a work plan for
229   CEN TC13 to integrate different protocols with the existing standards.
230   Most EMC guidelines and standards start at frequencies above 150kHz, which could lead to
231   interference between domestic appliances and PLC devices operating below this range. For
232   frequencies lower than 150kHz the EMC guidelines/regulations should be developed. For PLC
233   communication the use of the frequency range up to 540 kHz should be specified, subject to
234   protecting existing users of these frequencies for radio communication and other purposes.
235   For broadband PLC we recommend that where applicable and no alternative standard inside
236   ETSI/CEN/CENELEC can be found the IEEE P1901 should be taken into account.
237   Work with the ETSI PLT TC committee to evaluate the use of ITU-T PLC Narrow band OFDM
238   G.9955.
239
240
241   **Com-2: Harmonize activities on data transport technologies**
242   Developments made by ETSI and the data communication related IEC and CEN/CENELEC activities
243   within IEC and CEN/CENELEC should be mutually coordinated. The service capabilities defined by
244   ETSI should be integrated with the smart grid related application protocols.
245
246

A.3   Dependability and functional safety

248   **Dep-1 Check relevance of existing methodologies to smart grids**
249   Ask TCs (56 and 65A) whether their methodologies (with regard to dependability and functional
250   safety) are well-suited/applicable to smart grids.
251

A.4   Electromagnetic compatibility (EMC)

253   **EMC-1 Review existing standards**
254   CENELEC TC210 and Product Committees to review existing standards concerning an appropriate
255   modification for closing gaps in order to also ensure EMC in the frequency ranges from 2 kHz to
256   150 kHz (in practice 2-9 kHz and 9-150 kHz).

257   NOTE   Technical input in this domain can be found in several reports/publications, such as the CENELEC SC 205A Study
258   report on electromagnetic interference between electrical equipment/systems in the frequency range below 150 kHz,
259   (SC205A/Sec0260/R, April 2010). Nevertheless, further studies are probably necessary before a complete set of standards
260   can be available.

261   Furthermore, the following actions of the standardization communities are suggested to support low
262   frequency EMC/power quality in the context of smart grids.
263   **EMC-2 Review EMC and Power Quality levels**
264   Review electromagnetic compatibility levels and/or characteristics of voltage at interfaces for all
265   standard voltage levels of public electrical power networks, and define the associated operating
266   conditions in the context of the smart grids.
267   **EMC-3 Consider distorting current emissions from DER equipment**
268   Standardize how to give a limitation to the distorting current emission by DER equipment and to fairly
269   allocate the ability of networks to absorb distorting current emissions among present and possibly
270   forthcoming connected equipment, including Distributed Generation at sites in networks. Connected

271   equipment may well be other networks. The work is recommended to originate from documents
272   IEC TR 61000-3-6, IEC TR 61000-3-7, IEC TR 61000-3-13, IEC TR 61000-3-14 and
273   IEC TR 61000-3-15.
274

275   A.5   Generation

276 **Gen-1 Harmonized glossary, semantic & modelling between back-office applications (CIM[1])) and field**
277 **applications (IEC 61850[2]))**
278   Provide experts to IEC TC57 body to boost CIM/IEC 61850 harmonization planning, fix this issue
279   ASAP and establish clear messages to the market. Support electronic form of IEC 61850 data model
280   at IEC level based on UML language.
281   *Gen-1, Dis-2 have been grouped together.*
282

283 **Gen-2 Harmonization between IEC 62056-XX (DLMS/COSEM) data model and IEC 61850/CIM**
284   Take the lead on this IEC 62056-XX (DLMS/COSEM) data model harmonization with CIM/IEC 61850,
285   within the IEC body (through CENELEC TC57 and CENELEC TC13)
286   *Gen-2, SM-1, Ind-1 have been grouped together.*
287

288 **Gen-3 Extended field data modelling standard (part of IEC 61850) to support demand response, DER**
289 **and VPP**
290   Clearly express and formalize to CENELEC TC8X the selected use cases which the European smart
291   grids have to support and ensure IEC TC57/WG 17 body (through CENELEC TC57) will provide
292   expected answers in IEC 61850 data modelling regarding: Demand response for generators, for
293   ancillary services, including VPPs and aggregators. Support TC57/WG 13 initiatives to define use
294   cases and modelling (such as AI715)
295   Note : The SGCG group decided to remove from the initial target, "*Extended CIM to model more*
296   *accurately Generation Fleet Management Applications in the case of Bulk Generation, and to*
297   *integrate DER and VPPs*" considering that the link with the demand-response was very light,
298   and in addition that this work is already launched at IEC level, with not real added value of the
299   European bodies as such.
300   *Gen-3, Ind-2, HB-2 have been grouped together.*
301

302 **Gen-4 Standard for electrical connection and installation rules to ensure energy availability and**
303 **security, in the presence of a high ratio of DER**
304   Harmonize electrical connection and installation rules within Europe, down to all levels of connection
305   of DER
306 **Gen-5 Standard to allow all connected generators associated in VPPs to participate to new ways of**
307 **operating grid**
308   Adapt installation rules of DER to allow new ways of operating grid such as microgrid (TC 64 and
309   TC8X)
310   More specifically, TC64 should develop new requirements and adapt existing installation rules within
311   the HD 60364 to cover DER needs.

312   A.6   Transmission

313 **T1 – HV-DC grid architecture**
314   With the development of off-shore grids, there is a need for coordination, coherence and
315   interoperability for equipment (converters, circuit-breakers, protection,….) as well as for grid topology
316   (grid design, voltage level, grid code,…) in the High Voltage DC domain. The ESO standardization
317   should take into account the work done in the German committee context.
318 **T2 – Smart assets**

---

[1]   IEC 61968 and IEC 61970 standards provide models of transmission, distribution systems and energy markets, as well as partial models of power generation, models known as the CIM (Common Information Model), structure and semantics for integrating a variety of back-office applications.

[2]   IEC 61850 standard provides a model for substation automation system and renewable energy resources (PV, hydro & wind and other), a basis for field equipment communications, including semantics, and encompasses real-time operations as well as non-operational data, such as condition monitoring.

319 The ongoing IEC 61850-90-3 work, devoted to condition monitoring in the power energy domain,
320 should be encouraged. The present standard and protocol for communication in substations should
321 involve communication and relevant data models, whereas the relevant products Technical
322 Committees have to standardize the methods and the devices needed for on-line monitoring.
323 Therefore, it is recommended that the ongoing IEC standard involves on the one hand the experts
324 on equipment to monitor for the technical aspects and on the other hand representatives of users in
325 order to assess the condition values.
326 *T2, Dis-6 have been grouped together.*
327
328 **T3 – Offshore equipment**
329 A review of the existing standards for transmission equipment is required in order to check that the
330 special requirements for off-shore installations are properly covered. Otherwise, standards should be
331 adapted.
332 These tasks should be notably performed by TC 14 (transformers), TC 17 (switchgear), TC 38
333 (instrument measurement) and TC 20 (underground cable).

A.7   Distribution

335 **Dis-1 Feeder and Advanced Distribution Automation**
336 Develop a standard that supports feeder automation (at CEN/CENELEC), and Advanced Distribution
337 Automation, (including the case of presence of high ratio of DER).
338 *Dis-1 and Dis-7 have been grouped together.*
339
340 **Dis-2: Use CIM (see also Gen-1)**
341 Give high priority to the works needed in the area of harmonization of CIM /IEC 61850.
342 *Gen-1, Dis-2 have been grouped together.*
343
344 **Dis-3: Seamless communication between control centre and substation**
345 Support international work in order to provide seamless communication between control centres and
346 sub-stations based on IEC 61850.
347 **Dis-4: Work on a standard for cybersecurity taking into account the intensive use of public or private**
348 **communication services, enhance IEC 62351 in this area**
349 Security and privacy should be harmonised between IEC 62351 and what TC13 is setting-up within
350 IEC 62056.
351 **Dis-5: Auxiliary power systems standardization**
352 Develop standardization for auxiliary power systems (low voltage DC networks): AC/DC converters,
353 DC management systems, DC protection.
354 **Dis-6: Integrate condition monitoring capabilities**
355 Condition monitoring of components of substations or of lines provides technical information useful
356 for optimized loading and helps to increase the lifetime of the distribution assets. IEC 61850, the
357 present standard and protocol for communication in substations, should involve communication as
358 far as the sensors needed for on-line monitoring. Ongoing work in TC57: IEC 61850-90-3 (TR)
359 *T2, Dis-6 have been grouped together.*
360
361 **Dis-7 Standards for Medium Voltage (MV) lines ("feeder automation")**
362 Develop a set of standards covering V and I sensors, switching equipment (definition, and modelling)
363 and fault detectors (definition, and modelling) for Medium Voltage lines (overhead and underground)
364 *Dis-1 and Dis-7 have been grouped together.*
365

A.8   Smart metering

367 **SM-1: (Revenue metering) Harmonisation between IEC 62056-XX (DLMS/COSEM) data model and IEC**
368 **61850/CIM**
369 Currently various standards or extensions of existing standards are being developed to cover the
370 exchange of metering data. Examples are:
371 - EN 62056 Electricity metering – Data exchange for meter reading, tariff and load control
372 - EN 13757-1:2002: Communication systems for meters and remote reading of meters

373   -   IEC 61968-9: System Interfaces for Distribution Management – Part 9: Interface Standard
374   for Meter Reading and Control
375   While harmonization of EN 62056 and EN 13757 is already being undertaken, some standardization
376   initiatives go beyond the scope of M/441. A harmonization of standards more generally in this area is
377   necessary to prevent further development of different (and competing) standards for the same
378   purpose.
379   *Gen-2, SM-1, Ind-1 have been grouped together*
380
381   **SM-2 - Smart metering for EV**
382   Smart metering, building/home automation and electric vehicles are envisaged as elements in smart
383   electricity grids. It is recommended that CEN/CENELEC/ETSI consider the use cases involving
384   these elements and take care in their standardization work in these areas to ensure the needs and
385   applications of smart grids are addressed in a harmonized fashion.
386
387   **SM-3 - From Smart metering to Smart Grid, and e-mobility**
388   Specifically to assist the development of proposals for possible link technologies in relation to smart
389   grids and e-Mobility, it is recommended that CEN/CENELEC/ETSI should jointly undertake an
390   investigation of the interfaces required insofar as they are not currently being addressed within the
391   M/441 mandate. The ESOs should propose where standardization in these areas is necessary,
392   taking care to ensure harmonization with existing metering models and other relevant
393   standardization initiatives.

394   A.9   Industry

395   **Ind-1: Tariff information**
396   On-site energy management systems should be able to spread tariff information down to the load.
397   We recommend extending the IEC 61850 model (the most common backbone system for EMS) to
398   support tariff-related information.
399   *Gen-2, SM-1, Ind-1 have been grouped together*
400   **Ind-2: DR information**
401   The demand response mechanism is not considered yet to support network ancillary services. We
402   recommend extending the IEC 61850 model (DER) and other DR information channels to support
403   ancillary services participation.
404   *Gen-3, Ind-2, HB-2 have been grouped together*
405
406   **Ind-3: Smart Meter and building system interface**
407   In their work on data exchange between the smart meter and the building management system, the
408   European Standardization Organizations should ensure coordination between CEN TC 247 and
409   TC13.
410   **Ind-4: Harmonized data model for industry and power grid**
411   Too many data models already exist without mapping between them. We recommend harmonizing
412   the data model related to energy management between Industry and Electricity (EN 61158, EN
413   61850).This work should be coordinated between CLC/TC 205, TC 65 and TC57.
414   **Ind-5: Electrical installation allowing for DER integration**
415   The usage of distributed energy resources as part of electrical installations and part of micro grids for
416   industry raises new safety and protection issues. The multi-sources aspect is not covered by current
417   installation rules. We recommend TC 64 to work on new installation rules for safety aspects and
418   TC 8 or TC 99X to work on common rules for grid protection. TC64 should develop a dedicated part
419   within the HD 60364 to cover this need, keeping in mind that all national wiring rules through
420   European countries are based on the HD 60364.

421   A.10 Home & Building

422   **HB-1: Separate realization from standards description**
423   The use cases described above interface with the field of smart metering, but have to be logically separated.
424   In standardization, there are arguments for distinguishing meter gateways from energy management
425   gateways, considering both applications as two logical blocks, since both fields are driven by different kinds
426   of interests and innovation speeds. Competition is likely to result in different devices and technologies
427   combining logical applications defined by standardization. In order to be open for such market development

428 and for innovation, standardization should not define the device but the logical functions, data and interfaces
429 in case these are needed for communication between different market roles or devices.
430 **HB-2: Unified language needed to enable flexible energy consumption or production**
431 A unified language (a kind of common semantic layer above the existing technologies) has to be defined to
432 communicate demand response related elements (e.g. an incentive like a new price / tariff). A Europe-wide
433 or even worldwide unified data model for these aspects would be favourable considering the global market
434 for smart appliances, devices and automation systems. For that purpose, data models/profiles have to be
435 developed from the use cases. A multi-stakeholder committee considering the different domains and ESOs
436 involved should be assigned this task of considering ongoing initiatives (from research, industry and
437 standardization).
438 This approach can succeed only by broad introduction including existing standard technologies. Therefore,
439 the unified language must be mapped onto the communication standards lying below. These "lower
440 standards" should support this mapping mechanism which is not the case today.
441   *Gen-3, Ind-2, HB-2 have been grouped together*
442

A.11 Demand-Response

444 **DR-3: Complement Data Model for DR signals**
445 Include pricing signals, DR signals and DR process interfaces into CIM, IEC 62056 **-** COSEM and IEC
446 61850.

A.12 Other requests

448 Other requests have been added in the survey, which were raised after the report publication
449

450 **Other-1 : Smart Grid communication standards relying on the Internet-based standard Web Services**
451 **& harmonisation with CIM and IEC 61850**
452   Additional gap, focusing on standard communication technology to be used either within back-office
453   systems (such as monitoring & control centers), fields systems (such as feeder automation or
454   integration of distributed Energy Resources or active consumer)
455 **Other-2 : (Revenue metering) Harmonisation between IEC 62056-XX (DLMS/COSEM) and other**
456 **standardised (or on-going to be) revenue metering data model such as Meters&More, OSGP.**
457   Extension of the item 10. This item includes de facto the need for harmonisation with other standards
458   as stated in item 10.
459   Initially labelled « (Revenue metering) Harmonisation between IEC 62056-XX (DLMS/COSEM) or
460   OSGP data model », it has been agreed at the SGCG steering committee to extend its scope

461 **Annex B Work programme dashboard template**

462 This template is used by all gap leaders to breakdown the overall gap into monitorable and achievable
463 targets.

Gap ID

							Last update of
Gap nb	(refer to (3) - section 4)	**SDO leader1**				Update date	the dashboard
Gap ref	(refer to (3) - annex A)	**TF leader**	(people acting as ..)				
Gap title	(Gap title as refered in (3))	**Involved bodies**			⎫		
Gap details	(Gap detailed as defined in (3))				⎬	List of technical standardisation bodies involved in filling-up the gap	
					⎭		

Standard status

	Standard title	SDO	Technical body	Standard reference	Target std type	Expected work	Impact on Standard	starting status (dashboard start)	current status
Involved standards	Standard impacted by this action plan	Body in charge of managing this standard			{Report/TR /TS, IS}	Action plan expected added value {Creation, Boost/ Follow-up}	Formal expected impact of the action {creation of /revision of a standard }	The formal document status at the start of the action{CD, CDV, FDIS, IS, …}	The current status of the document {same as beside}
	List of standards impacted through filling-up the gap								

Action plan and follow-up

Main steps	Steps content	who (Body)	who (people)	Initial targetted date	Current targetted date	step status update		
						Status	**When**	**Information**
1	Action n°1 title	Body where action n°1 will be hosted	People specifically in charge of this action	Date registered at the start of action plan	Latest forecast for the action achieved	{open/closed}	Date of the update of the status	Free text to complement the status update
2								
3	List of monitorable actions to achieve the gap filling-up							
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538 **Annex D Work programme details**

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540 This annex provides the detailed dashboard of the work plan of each selected standardisation gaps, based
541 on the template presented in section 4.
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543 It is important to consider that these dashboards are still draft one, because of the absolute need to follow
544 the internal processes of the concerned standardisation bodies.
545 It will become "committing" as soon as these technical bodies officially validate them.

546 **D.1 Gap 9 - Gen-2 SM-1 Ind-1- (Revenue metering) Harmonisation between IEC 62056-XX (DLMS/COSEM) data**
547 **model and IEC 61850/CIM**

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Gap ID

Gap nb	9	SDO leader1	CEN-CENELEC-ETSI	SMCG		Update date	20-Oct-11
Gap ref	Gen-2 SM-1 Ind-1	TF leader	Thomas Schaub (Don Taylor) -				
Gap title	(Revenue metering) Harmonisation between IEC 62056-XX (DLMS/COSEM) data model and IEC 61850/CIM	Involved bodies	IEC	TC13 WG14			
			IEC	TC13			
Gap details			IEC	TC57 WG10			
			IEC	TC57			

Standard status

	Standard title	SDO	Technical body	Standard reference	Target std type	Expected work	Impact on Standard	starting status (mandate start)	current status
Involved standards	TR on harmonisation CIM and COSEM	IEC	TC57/TC13		TR	Launch	Creation		in planning
		IEC	TC57 WG14	IEC 61968-9	IS	Launch	Revision		in planning
		IEC	TC57 WG14	IEC 62056-62	IS	Launch	Creation		
	TR on harmonisation IEC61850 and COSEM	IEC	TC57/TC13	IEC 61850-90-xxx	TR	Launch	Creation		

Action plan and follow-up

				Initial targetted date	Current targetted date	step status update		
Main	Steps content	who (Body)	who			Status	When	Information

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steps			(people)					
1	IEC TC 13 and IEC TC 57 meeting (TF initiated)	TC57&TC13		mai-11	mai-11		juil-11	completed
2	Set a project plan up	TC57&TC13		déc-11	déc-11		oct-11	first draft to be presented at TC13 plenary in Melbourne
3	Technical draft proposal by the joint WG	TC57&TC13		July 12	July 12			in work
4	NWIP for CIM-COSEM (IEC 62056) harmonisation to launch and get approved, including the revision of IEC 61968-9			Dec 12	Dec12			in work
5	DC for 61850 (IEC 62056-61850) extension for handling COSEM data model	TC57&TC13		July 12	July 12			
6	DTR for 61850 (IEC 62056-61850) extension for handling COSEM data model	TC57&TC13						
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550 **Notes :**

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552 **D.2   Gap 10 - Gen-3 Ind-2 HB-2 - Extended field data modelling standard (part of IEC 61850) to support demand**
553 **response, DER, VPP and home/building/industry automation**

554
Gap ID

Gap nb	10	SDO leader1	IEC	TC57 WG21		Update date	2-Nov-11
Gap ref	Gen-3 Ind-2 HB-2	TF leader	Peter Ferstl				
Gap title		Involved bodies	CENELEC	TC57			
	Data modeling for demand-response - supply/demand sides		CEN-CENELEC-ETSI	SMCG			
Gap details	Extended field data modelling standard (part of IEC 61850) to support demand response, DER, VPP and home/building/industry automation Unified language for tariff information (for demand-response)		IEC	TC13			
			IEC	TC57 WG21			
			CEN	TC247			
			CENELEC	TC205			
			ETSI	M2M			
			CEN-CENELEC-ETSI	M468			

Standard **status**								
	Standard title	SDO	Technical body	Standard reference	Target std type	Expected work	Impact on Standard	starting status (mandate start)	current status
Involved standards	Distributed energy resources logical nodes (including multiple uses of DERs)	IEC	TC57 WG17	61850-7-420	IS	Launch	Revision	not started	initiated
	Object Models for Photovoltaic, Storage and other DER inverters	IEC	TC57 WG17	61850-90-7	TR	Launch	Creation	DC circulating for comment	DTR circulating for voting
	Object Models for Batteries	IEC	TC57 WG17	61850-90-9	TR	Launch	Creation	draft internally released	draft internally released

Object modelling for demand response and home/building/industry automation (IEC 61850)	IEC	TC57 WG21	61850-xxx		Launch	Creation	not started	not started

Action plan and follow-up

Main steps	Steps content	who (Body)	who (people)	Initial targetted date	Current targetted date	step status update		
						Status	When	Information
1	Confirm the ability of Peter to lead the complete scope underligned in this gap		R. Sporer			done	Oct 2011	to feed SGCG - SP
2	Pick-up Use cases from European projects	TC8X		janv-12				to feed SGCG - SP
3	Collect and validate a first set of Use cases	TC57 WG21		déc-11				based on all available input
4	Consolidate a first set of Use cases	SGCG-SP		mars-12				including TC57 WG21 and TC8X, as well as the output of Gap 12
5	First draft, data modelling for DER, VPP (IEC 61850-7-420 ed. 2)	TC57 WG17		juin-13				
6	Publication of IEC 61850-7-420 ed. 2 (data modelling for DER, VPP)	TC57 WG17		juin-14				
7	Draft data modelling for demand response and home/building/industry automation (IEC 61850) - Joint work with the involved bodies listed above	TC57 WG21		juin-13				
8	Assess the solutions potentially useable for the target (OpenADR, EMIX)	TC57 WG21		juin-12				still open
9	Publication of data modelling standard for demand response and home/building/industry automation (IEC 61850) - Joint work with the involved bodies listed above	TC57 WG21		juin-14				
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556 **D.3 Gap 8 - Gen-1- Dis-2 - Harmonized glossary, semantic & modelling between back-office applications (CIM)) and**
557 **field applications (IEC 61850))**

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Gap ID

Gap nb	8	SDO leader1	IEC			Update date	18-Oct-11
Gap ref	Gen-1 Dis-2	TF leader	L. Guise				
Gap title	Harmonized glossary, semantic & modelling between back-office applications (CIM)) and field applications (IEC 61850))	Involved bodies	IEC	TC57 WG14			
			IEC	TC57 WG13			
Gap details	Provide experts to IEC TC57 body to boost CIM/IEC 61850 harmonization planning, fix this issue ASAP and establish clear messages to the market. Support electronic form of IEC 61850 data model at IEC level based on UML language. Give high priority to the works needed in the area of harmonization of CIM /IEC 61850.		IEC	TC57 WG10			
			IEC	TC57 WG17			
			IEC	TC88			
			ETSI	M2M			

Standard status

	Standard title	SDO	Technical body	Standard reference	Target std type	Expected work	Impact on Standard	starting status (mandate start)	current status
Involved standards	**Extension of IEC 61968 for harmonisation with 61850**	IEC	TC57 WG14	IEC 61968	TR	Launch			
	Extension of IEC 61970 for harmonisation with 61850	IEC	TC57 WG13	IEC 61970	TR	Launch			
	Extension of IEC 61850 for harmonisation with CIM	IEC	TC57 WG10	IEC 61850	TR	Launch			

Action plan and follow-up

				Initial targetted date	Current targetted date	step status update		
Main steps	**Steps content**	**who (Body)**	**who (people)**			**Status**	**When**	**Information**

SGCG Report on Standardisation Gaps Prioritisation for the Smart Grid;v1.2; 2011-11-30

1	Draft a NWIP for transforming the ambition and pre-study outcome into concrete impact, at IEC level.	CLC TC57	Mathias Uslar A. Maizener E. Lambert T. Coste	next CLC meeting		Open		Decided at the CLC 57 Kick-off meeting
1	Get the NWIP approved	IEC TC 57		avr-12				
2	Elaborate the technical impact on IEC 61850 (DTR)			avr-13				
3	Elaborate the technical impact on IEC 61968			avr-13				
4	TR approved			juin-14				
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561 **D.4 Gap 18 - Dis-4 - Develop Cyber-security around IEC 62351**

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Gap ID

Gap nb	18	SDO leader1	SGIS			Update date	**21 October 2011**
Gap ref	Dis-4	TF leader	JP. Mennella				
Gap title		Involved bodies	IEC	TC57 WG15			
	Develop Cyber-security around IEC 62351		IEC	TC57 WG10			
Gap details			CENELEC	TC13 WG02			
	Work on a standard for cybersecurity as long as intensive public communication services (from Telecom Operators) will be used in distribution, enhance IEC 62351 in this area.		ETSI				
			IEC	TC13 WG14			

Standard status

	Standard title	SDO	Technical body	Standard reference	Target std type	Expected work	Impact on Standard	starting status (mandate start)	current status
Involved standards	Introduction	IEC	TC57 WG15	IEC 62351-1	TS	Boost	Revision	initiated	
	Glossary	IEC	TC57 WG15	IEC 62351-2	TS	Boost	Revision	initiated	
	Profiles including TCP/IP	IEC	TC57 WG15	IEC 62351-3	TS	Boost	Revision	initiated	
	Profiles including MMS	IEC	TC57 WG15	IEC 62351-4	TS	Boost	Revision	initiated	
	Security for IEC 60870-5 and Derivatives	IEC	TC57 WG15	IEC 62351-5	TS	Boost	Revision	initiated	
	Security for IEC 61850	IEC	TC57 WG15	IEC 62351-6	TS	Boost	Revision		
	Network and system management data object models	IEC	TC57 WG15	IEC 62351-7	TS	Boost	Revision		
	Role Based Access Control	IEC	TC57 WG15	IEC 62351-8	TS	Boost	Creation		

Key Management	IEC	TC57 WG15	IEC 62351-9	TS	Boost	Creation	initiated	
Security Architecture Guidelines	IEC	TC57 WG15	IEC 62351-10	Report	Boost	Push Publication	initiated	
COSEM/DLMS	IEC	TC13 WG02	IEC 62056	Report		Revision		(Seen as out of SGIS scope at present)
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Action plan and follow-up

Main steps	Steps content	who (Body)	who (people)	Initial targetted date	Current targetted date	step status update Status	When	Information
1	SGIS to come back with a proposal	SGCG-SGIS						
2	Focus on IEC 62351 for Security in Energy Automation, provide overview on current standard	SGCG-SGIS				Done		
3	Provide comments on IEC 62351 and align with NISTIR-7628 Security Review Comments	SGCG-SGIS		déc-11		Work in Progress		
4	Map NISTIR-7628 security requirements against IEC 62351 (Gap Analysis)	SGCG-SGIS		déc-11		Work in Progress		The leaders of IEC 62351 are part of the SGCG-SGIS work, and then are in position to anticipate as much as possible technical impacts on the standard
5	Additional gap analysis based on functional use cases to derive specific security requirements, which may not already have been covered by either NISTIR-7628 requirements or IEC 62351 functionality	SGCG-SGIS		TBD		TBD		provide additional use cases which will then be analyzed for additional security requirments (bottom up approach)
6	Based on the gap analysis dedicated actions need to be derived for the next steps	SGCG-SGIS		TBD		Not Started		
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565 **D.5 Gap 11-12 - Gen-4 Gen-5 - Connecting DER to the grid**

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Gap ID

					Update date	22-Oct-11
Gap nb	11-12	**SDO leader1**				
Gap ref	Gen-4 and Gen 5	**TF leader**	Serge VOLUT			
			CENELEC	TC8X WG3		
Gap title	Standard for electrical connection and installation rules to ensure energy availability and security, in presence of high ratio of DER and allowing connected generators to participate to new ways of operating grid (e.g. associated in VPPs or micro grids)	**Involved bodies**	CENELEC	TC8X WG5		
			IEC	TC95		
			IEC	TC38		
Gap details	Harmonize/adapt electrical connection to the grid and installation rules Provide with use cases addressing the operation of the grid in presence of high ratio of DER. Provide with requirements and product standards for specific protective devices, if nece		IEC	TC64		
			IEC	TC82		
			IEC	TC57		
			IEC	TC88		
			IEC	TC13		

Standard status

	Standard title	SDO	Technical body	Standard reference	Target std type	Expected work	Impact on Standard	starting status (mandate start)	current status
Involved standards	requirements for connection of micro-generators to the LV grid	CENELEC	TC8X WG3	EN 50438 Ed 2	EN	Boost	Revision	DC with received comments	DC with received comments
	requirements for connection of DER to the LV grid	CENELEC	TC8X WG3	TS 50549-1	TS	Boost	Revision	CD with received comments	prTS voted negatively

requirements for connection of DER to the MV grid	CENELEC	TC8X WG3	TS 50549-2	TS	Boost	Revision	CD with received comments	prTS voted negatively
Smart Grid User Interface, Part 2: Domain Side Energy Source Interconnection with the Grid	IEC	TC8		IS	Launch	Creation	not started	NWIP circulating
Low-voltage generating sets and other requirements if needed	CENELEC	TC64	HD 60364-5-551 and another parts if needed	HD	Boost	Revision	not started	not started
IEC 61850 object models for photovoltaic, storage, and other DER inverters	IEC	TC57	IEC 61850-90-7	TR	Launch	Creation	initiated	DC with received comments
Key information from main EU smart grid projects for standardization purposes	CENELEC	TC8X WG5		TR	Launch	Creation	NWIP agreed and group kicked_off	
Use case collection (process under resp of SGCG/SG sustainable processes)	CENELEC	TC8X WG5			contribution to use case collection			

Action plan and follow-up

Main steps	Steps content	who (Body)	who (people)	Initial targetted date	Current targetted date	step status update		
						Status	When	Information
1	To provide with key information from EU smart grid projects	TC 8X/WG5	John Sinclair	déc-11				draft TR
2	To provide with one or two Use cases (e.g. extract one related to VPPs functioning)	TC8X WG5		mars-12				
3	Define generic material (functions, glossary, actors, …)	TC8XWG5 and SGCG/SG SP			(aligned with SGCG-SP team work)			use and update IEC TC8 Template
4	To specify requirements for micro-generators connected to the LV grid EN 50438	TC8X WG3		déc-12	déc-12			

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5	To specify requirements for connection of DER to the LV grid TS 50549-1	TC8X WG3		sept-11	sept-12	prTS voted negatively		"disturbances" due to parallel drafting of a European Grid Code by ENTSO-E
6	To specify requirements for connection of DER to the MV grid TS 50549-2	TC8X WG3		sept-11	sept-12	prTS voted negatively		idem
7	Liaison with IEC TC8 for connection to the (smart) grid	TC8X	S Botton	continous work				8/1303/RVN 8/1301/NP
8	To adapt installation rules	TC64	E. Tison	ref to Gap 25 - Ind 5				liaison with TC82 probably needed
9	Open investigation on product standards to specify the protective functions which may be needed, when considering DER connection to the Grid	TC95	Serge Volut	nov-11	nov-11	Open		IEC TC95 is going to propose to set a Chairman Advisory Group. The purpose of this CAG is to consider the smart grid contribution of TC95. Some gaps on protections have been identified to support integration of DER. A first meeting is planned in November liaison with TC 82 probably needed
10	Establish a liaison between TC57 and TC95 for data modelling of the communicating interface, related the connection of DER-related function	TC95	Serge Volut	mars-12				
11	Get a proposal for a a working program related to protection function associeted to connection of DER to the grid	TC95	Serge Volut	déc-11				
12	Approval of a formal working program related to protection function associeted to connection of DER to the grid	TC95	Serge Volut	déc-12				

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569 **D.6   Gap 26- Other-1- Smart Grid communication standards relying on the Internet based standard Web Services &**
570 **harmonisation with CIM and IEC 61850**

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Gap ID

Gap nb	26	SDO leader1	IEC	TC57 WG17		Update date	27-Oct-11
Gap ref	Other-1	TF leader	L. Guise				
Gap title	Smart Grid communication standards relying on the Internet based standard Web Services & harmonisation with CIM and IEC 61850	Involved bodies	IEC	TC57 WG17			
			IEC	TC13 WG02			
Gap details	Gap, focusing on standard communication technology to be used either within back-office systems (such as monitoring & control centers), fields systems (such as feeder automation or integration of distributed Energy Resources or active consumer)		ETSI	M2M			
			IEC	TC88			
			IEC	TC57 WG21			

Standard status

	Standard title	SDO	Technical body	Standard reference	Target std type	Expected work	Impact on Standard	starting status (mandate start)	current status
Involved standards	Mapping of IEC 61850 SCSM over the web services	IEC	TC57 WG17	IEC 61850-8-2	IS	Boost	Creation	NWIP circulating	
	(next step - to be confirmed)	IEC	TC13 WG02	IEC 62056					

Action plan and follow-up

Main steps	Steps content	who (Body)	who (people)	Initial targetted date	Current targetted date	step status update		
						Status	When	Information
1	Work with the architecture team to state where web services are expected to be used	SGCG-Ref Architecture						
2	Produce a NWIP to IEC for mapping IEC 61850	UTE	L. Guise	oct-11	oct-11	Closed		

	on web-services for connecting DER, Storage, feeder automation, smart users, and EV charging spots							
3	Get it accepted by IEC national committees	All		déc-11		Open		
4	Form a group	IEC TC57 WG17	L. Guise	janv-12		Open		at the IEC TC 57 WG17
5	elaborate the requirement	IEC TC57 WG17	B. Bony	mai-12				
6	elicit the web services family to consider	IEC TC57 WG17	B. Bony	sept-12				
7	produce a CD draft	IEC TC57 WG17	B. Bony	déc-12				
8	Produce a CDV	IEC TC57 WG17	B. Bony	févr-13				
9	Produce a FDIS	IEC TC57 WG17	B. Bony	nov-13				
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574 **D.7 Gap 17- Dis-3 - Seamless communication between control centre and substation**

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Gap ID

Gap nb	17	SDO leader1	IEC	TC57 WG19		Update date	9-Nov-11
Gap ref	Dis-3	TF leader	P. Lhuillier (P. Tantin)				
Gap title	Seamless communication between control centre and substation	Involved bodies	IEC	TC57 WG19			
			IEC	TC57 WG10			
Gap details			ETSI				
	Support international work in order to provide seamless communication between control centres and sub-stations based on 61850						

Standard status

	Standard title	SDO	Technical body	Standard reference	Target std type	Expected work	Impact on Standard	starting status (mandate start)	current status
Involved standards	IEC 61850-based Communication between Substation and control centre	IEC	TC57 WG19	IEC 61850-90-2	TR	Boost	Creation	std frame released	draft internally released
	WAN technology guidelines for IEC 61850	IEC	TC57 WG10	IEC 61850-90-11	TR	Launch	Creation		

Action plan and follow-up

Main steps	Steps content	who (Body)	who (people)	Initial targetted date	Current targetted date	step status update		
						Status	When	Information
1	Finalise IEC 61850-90-2 draft	IEC TC57 WG19	P. Lhuillier	déc-11				
2	circulate as DTR	IEC TC57	P. Lhuillier	mars-12				

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		WG19						
3	TR draft ready for circulation	IEC TC57 WG19	P. Lhuillier	déc-12				
4	Establish a DC for opening the new work on WAN for IEC 61850	IEC TC57 WG10	H. Kirmann					LG to ask Hubert K for further details
5	Evaluate the interest of being closer of the European initiative "EC Utilities and communication forum"		Claudio M.					
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578   **D.8   Gap 16 - Dis-1- Dis-7 - Feeder and Advanced Distribution automation**

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Gap ID

Gap nb	16	SDO leader1				Update date	1-Nov-11
Gap ref	Dis-1 Dis-7	TF leader	José Manuel Inchausti				
Gap title	Feeder and Advanced Distribution automation	Involved bodies	IEC	TC57 WG17			
			IEC	TC38 WG46			
Gap details	Develop a standard that supports feeder automation (at CEN/CENELEC), and Advanced Distribution Automation, (including the case of presence of high ratio of DER). Develop a set of standards covering V and I sensors, switching equipment (definition, and modelling) and fault detectors (definition, and modelling) for Medium Voltage lines (overhead and underground)		IEC	TC57 WG14			
			IEC	TC95			

Standard status

	Standard title	SDO	Technical body	Standard reference	Target std type	Expected work	Impact on Standard	starting status (mandate start)	current status
Involved standards	Feeder Automation communication	IEC	TC57 WG17	IEC 61850-90-6	TR	Boost	Creation	std frame released	
	Fault detectors	IEC	TC38 WG46			Boost	Creation		
	Mapping of IEC 61850 over the web services (ref Gap "Other-1")	IEC	TC57 WG17	IEC 61850-8-2	IS				

Action plan and follow-up

Main steps	Steps content	who (Body)	who (people)	Initial targetted date	Current targetted date	step status update Status	When	Information
1	Find a leader	SGCG	L. Guise	oct-11	oct-11	Closed		

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2	Contribute and feed the current IEC work by European needs	SGCG	José Manuel Inchausti	déc-11				
3	Prepare the IEC 61850-90-6 draft	IEC TC57 WG17	WG17 TF leader	janv-12				
4	Review the IEC 61850-90-6 draft	SGCG	José Manuel Inchausti	janv-12				
5	Prepare the IEC 61850-90-6 DC	IEC TC57 WG17	WG17 TF leader	juin-12				
6	Review the IEC 61850-90-6 DC	SGCG	José Manuel Inchausti	juin-12				
7	Contribute to the new standard on fault detector							
8	Contribute to the new IEC 61850-8-2 for mapping IEC 61850 over web services	SGCG	refer to gap 26	janv-12				feed with communication requirement refer to gap 26 - Other-1
9	IEC 61850-90-6 TR	IEC TC57 WG17	WG17 TF leader	juin-13				
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582 **D.9 Gap 3 - Com-2 - Harmonize activities on data transport technologies**

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Gap ID

Gap nb	3	SDO leader1	IEC	TC57 WG20		Update date	9-Nov-11
Gap ref	Com-2	TF leader	John Newbury				
Gap title	Harmonize activities on data communication technologies.	Involved bodies	CENELEC	TC13 WG02			
			ETSI	ETSI PLT			
Gap details	Developments made by ETSI in data communications and related to CEN/CENELEC. Activities within IEC and ITU-T., CEN/CENELEC, should be mutually coordinated and harmised . The service capabilities defined by ETSI should be integrated with the smart grid re		IEC	TC57 WG20			
			CEN	TC247			
			IEC	CISPR22			
			CENELEC	SC205A			
			Other	ITU-T			
			IEC	TC57 WG19			
			IEC	TC57 WG09			

Standard status

	Standard title	SDO		Standard reference	Target std type	Expected work	Impact on Standard	starting status (mandate start)	current status
Involved standards	EN50065-7	CENELEC	SC205A	EN50065-7	EN	Follow-up	Revision		
	ITU-T G.hn(G.9960/61) and G.hnem(G.9955/56)	IEC	ITU-T	(9960/G9961)	IS	Launch	Creation	TS	initiated
	Broad band PLT	IEC	CISPR22	55022	Report	Follow-up	Creation	DC with received comments	
		IEC	TC57 WG09						

Action plan and follow-up

				Initial	Current	step status update		
Main	Steps content	who (Body)	who	targetted	targetted	Status	When	Information

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steps			(people)	date	date			
1	Contribute to the new TC57 WG9 work, to ensure harmonised activities	IEC TC57 WG20 & IEC TC57 WG9	John Newbury	déc-11				
2	Comparison of standards from Cen, Cenelec, Cenelec-Etsi, CISPR, IEC TC57 and ITU - Identify potential power line transmission co-existence problems	IEC TC57 WG20	John Newbury	mars-12				
3	Extend Frequency range on the low frequency EN50065-7	SC205A	SC205A WG10	2013	2013			
4	9960/G9961 -> Develop Frequency range to meet smart grid requirements; Development of protocols supported by these standards	ITU-T and IEC TC57 WG20		2013	2013			
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586 **D.10 Gap 22 - SM-3 - From Smart metering to Smart Grid, and e-mobility**

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Gap ID

Gap nb	22	SDO leader1	Ad hoc group			Update date	2-Nov-11
Gap ref	SM-3	TF leader	Claus Andersen				
Gap title	From Smart metering to Smart Grid, and e-mobility	Involved bodies	IEC	TC13			
			IEC	TC57 WG17			
Gap details	Specifically to assist the development of proposals for possible link technologies in relation to smart grids and e-Mobility, it is recommended that CEN/CENELEC/ETSI should jointly undertake an investigation of the interfaces required insofar as they are not currently being addressed within the M/441 mandate. The ESOs should propose where standardization in these areas is necessary, taking care to ensure harmonization with existing metering models and other relevant standardization initiatives.		CEN-CENELEC-ETSI	SMCG			
			ETSI	M2M			
			Other	JWG V2G CI			

Standard status

	Standard title	SDO	Technical body	Standard reference	Target std type	Expected work	Impact on Standard	starting status (mandate start)	current status
Involved standards	To be determined							draft internally released	
								draft internally released	

Action plan and follow-up

Main steps	Steps content	who (Body)	who (people)	Initial targetted date	Current targetted date	step status update Status	When	Information
1	Establish use cases relevant to e-Mobility	SGCG Use	Willem			In hand		

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#								
		case TF	Strabbing					
2	Identifty applicable standards		Willem Strabbing					
3	Review by e-Mobility & Smart meter steering groups		?	Feb 2012?				
4	Identification of gaps not covered by M/441		?	Feb 2012?				
5	Agreement on allocation of gaps to M/441 or M/468 TCs		?	end March 2012?				
6	CAG to review and include in smart meter work programme			end March 2012?				
7	Ad hoc group on 'Smart Charging'	SGCG,EMCG	Claus Amtrup Andersen	end March 2012?		ToR to be approved	before 31/12-11	
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590 **D.11 Gap 23 - Ind-3 - Smart metering data to building system interface**

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Gap ID

Gap nb	23	SDO leader1	SMCG			Update date	28-Nov-11
Gap ref	Ind-3	TF leader	David Johnson				
Gap title	Smart metering data to building management system interface	Involved bodies	CEN-CENELEC-ETSI	SMCG			
			IEC	TC13			
Gap details	In their work on data exchange between the smart meter and the building management system, the European Standardization Organizations should ensure coordination between TC205, TC57 and CEN TC 294 / CENELEC TC13.		CEN	TC294			
			CENELEC	TC205			
			CENELEC	TC57			
			ETSI	M2M			

Standard status

	Standard title	SDO	Technical body	Standard reference	Target std type	Expected work	Impact on Standard	starting status (mandate start)	current status
Involved standards	Provisionally standards noted in TR 50572 as relevant to the H2/H3 interface and coming under CLC TC 205.								

Action plan and follow-up

Main steps	Steps content	who (Body)	who (people)	Initial targetted date	Current targetted date	step status update		
						Status	When	Information
1	Smart meter steering group (CAG) to agree SMCG lead	CAG	D. Hec	nov-11				Meetings with TC205 to develop a consistent work program

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594   **D.12 Gap 25 - Ind-5 - Electrical installation allowing DER installation**

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Gap ID

Gap nb	25	**SDO leader1**	IEC	TC64		Update date	27-Sep-11
Gap ref	Ind-5	**TF leader**	E. Tison				
Gap title		**Involved bodies**	IEC	TC64			
	Electrical installation allowing DER installation		CENELEC	TC8X			
Gap details	The usage of distributed energy resources as part of electrical installations and part of micro grids for industry raises new safety and protection issues. The multi-sources aspect is not covered by current installation rules. We recommend TC 64 to work on new installation rules for safety aspects and TC 8 or TC 99X to work on common rules for grid protection. TC64 should develop a dedicated part within the HD 60364 to cover this need, keeping in mind that all national wiring rules through European countries are based on the HD 60364.		CENELEC	TC99X			

Standard status

	Standard title	SDO	Technical body	Standard reference	Target std type	Expected work	Impact on Standard	starting status (mandate start)	current status
Involved standards	LV Electrical installation rules, covering multiple sources	IEC	TC64	IEC 60634		Launch	Revision		

Action plan and follow-up

Main steps	Steps content	who (Body)	who (people)	Initial targetted date	Current targetted date	step status update Status	When	Information
						step status update		
						Status	When	Information
1	IEC/TC64 decided during its last plenary meeting held in Bejing on May 2011 to set up a	IEC TC64	E TISON	end 2011		to send call for	sept-11	

					experts		
	Chairman Advisory Group to study the impact of Smart Grid on IEC/TC64 document (mainly IEC 60364 series)						
2	To list all possible technical issues on IEC 60364 and all IEC/TC64 documents possibly impacted by Smart Grid	IEC TC64	E TISON	October 2012			
3	To propose an action plan for the next IEC/TC64 plenary meeting to be held in Oslo on October 2012	IEC TC64	E TISON	October 2012			
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598 **D.13 Gap 5 - EMC-1 - Review existing standards (EMC)**

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Gap ID

Gap nb	5	**SDO leader1**	CLC 210			Update date	28-Nov-11
Gap ref	EMC-1	**TF leader**	Claudia Imposimato				
Gap title	Review existing standards (EMC) in the frequency ranges from 2 kHz to 150 kHz (in practice 2-9 kHz and 9-150 kHz).	**Involved bodies**	CENELEC	TC210			
			CENELEC	TC13 WG01			
Gap details	CENELEC TC210 and Product Committees to review existing standards concerning an appropriate modification for closing gaps in order to also ensure EMC in the frequency ranges from 2 kHz to 150 kHz (in practice 2-9 kHz and 9-150 kHz). Technical input in this domain can be found in several NOTE reports/publications, such as the CENELEC SC 205A Study report on electromagnetic interference between electrical equipment/systems in the frequency range below 150 kHz, (SC205A/Sec0260/R, April 2010). Nevertheless, further studies are probably necessary before a complete set of standards can be available. Furthermore, the following actions of the standardization communities are suggested to support low frequency EMC/power quality in the context of smart grids.		ETSI	ERM			
			CENELEC	SC205A			
			IEC	TC77			
			IEC	TC77/SC77A			
			IEC	CISPR			

Standard status

	Standard title	SDO	Technical body	Standard reference	Target std type	Expected work	Impact on Standard	starting status (mandate start)	current status
Involved standards	Compatibility Levels for Low-Frequency Conducted Disturbances and Signalling in Public Low-Voltage Power Supply Systems	IEC	TC77/SC77A	IEC 61000-2-2	IS	Boost	Revision		
	Basic Standard - Immunity to conducted, differential mode disturbances in the frequency 2 – 150 kHz at a.c. ports	IEC	TC77/SC77A	IEC 61000-4-19	IS	Boost	New edition		

prTR50xxx: Electricity metering equipment - Severity levels, immunity requirements and test methods for conducted disturbances in the frequency range 2 -150 kHz	CENELEC	TC13 WG01	PrTR50XXX	IS	Boost	Creation		
emission requirement in the range of 2-150kHz	IEC					Creation		

Action plan and follow-up

Main steps	Steps content	who (Body)	who (people)	Initial targetted date	Current targetted date	step status update Status	When	Information
1	IEC 61000-4-19	IEC SC77A WG6	C. Imposimato; M. Lutz	June 2013	June 2013	NWIP agreed and group kicked_off	January 2012	77A/746/NP positively voted (93.1% of voting members). First CD foreseen in Janaury 2012 at latest
2	IEC 61000-2-2	IEC SC77A WG8	L. Berthet	2012 (guess)	2014 (guess)	initiated		Maintenance of an existing standard. Investigation has started
3	Establisment of a joint TF dealing with emission requirement in the range of 2-150kHz	Joint TF CISPR and SC77A			juin-12			decision at the previous Melbourne meeting (Nov 2011)
4	PrTR50XXX	CLC TC 13 WG01	B. Ricciardi	end 2011	end 2011	initiated		
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602 **D.14 Gap 6 - EMC-2 - Review EMC and Power Quality levels**

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Gap ID

Gap nb	6	SDO leader1				Update date	22-Oct-11
Gap ref	EMC-2	TF leader	H. Rochereau				
Gap title	Review Power Quality levels and measurement methods (EMC related issues are treated in Gap 5 and 7)	Involved bodies	CENELEC	TC8X WG1			
			IEC	SC77A WG9			
Gap details	Review of characteristics of voltage at interfaces (PQ) for all standard voltage levels of public electrical power networks, and associated measurement methods in the context of the smart grids (high ratio of DER, new ways of operating the grid).		IEC	TC85 WG20			

Standard status

	Standard title	SDO	Technical body	Standard reference	Target std type	Expected work	Impact on Standard	starting status (mandate start)	current status
	Application Guide for EN 50160	CENELEC	TC8X WG1	TR50422	TR	Boost	Revision	initiated	draft internally released
	Power Quality Instruments	IEC	TC85 WG20	IEC62586-1,-2	EN	Boost	Revision		
	power Quality measurement methods	IEC	SC77A WG9	IEC 61000-4-30	EN	Boost	Revision	initiated	NWIP circulating

Action plan and follow-up

Main steps	Steps content	who (Body)	who (people)	Initial targetted date	Current targetted date	step status update		
						Status	When	Information
1	get results from gap 11-12	TC8X	S Volut					
2	add in TR50422 an annex on impact of DER	TC8X WG1	G Bartak	dec 2012	dec 2012			

	on supply voltage							
3	add in TR50422 an annex on impact of disturbance in frequency range above 2 kHz on supply voltage	TC8X WG1	G Bartak	dec 2012	dec 2012			
4	Consider the need for developping measurement method in the frequency range 2-150 kHz	IEC SC77A WG9		dec 2012	dec 2012			
5	To add measurement method in IEC 61000-4-30, if needed	IEC SC77A WG9		dec 2013	dec 2013			
6	To implement measurement method in PQ measuring instrument product standard, if needed	IEC TC85 WG20	F Gruffaz	dec 2014	dec 2014			
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606 **D.15 Gap 7 - EMC-3 - Consider distorting current emissions from DER equipment**

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Gap ID

Gap nb	7	SDO leader1	CLC 210			Update date	9-Nov-11
Gap ref	EMC-3	TF leader	Claudia Imposimato				
Gap title	Consider distorting current emissions from DER equipment	Involved bodies	CENELEC	TC210			
			ETSI	ERM			
Gap details	Standardize how to give a limitation to the distorting current emission by DER equipment and to fairly allocate the ability of networks to absorb distorting current emissions among present and possibly forthcoming connected equipment, including Distributed Generation at sites in networks. Connected equipment may well be other networks. The work is recommended to originate from documents IEC TR 61000-3-6, IEC TR 61000-3-7, IEC TR 61000-3-13 and future IEC TR 61000-3-14.		IEC	TC77/SC77A			

Standard status

	Standard title	SDO	Technical body	Standard reference	Target std type	Expected work	Impact on Standard	starting status (mandate start)	current status
Involved standards	Assessment of low frequency electromagnetic immunity and emission requirements for dispersed generation systems in LV network	IEC	TC77/SC77A	IEC 61000-3-15	TR		Creation		Closed

Action plan and follow-up

				Initial targetted date	Current targetted date	step status update		
Main steps	Steps content	who (Body)	who (people)			Status	When	Information

1	61000-3-15	IEC SC77A WG6	C. Imposimato			Closed	Sept 2011	
2	review of standards impacted by 61000-3-15, in view of implementing its outcomes	All IEC SC77A WGs		déc-13				As agreed in the last IEC 77A WG8 meeting (September 2011), beside the consequences of new document IEC 61000-3-15, it is also necessary to revise Technical Reports IEC 61000-3-6, 61000-3-7, 61000-3-13 and 61000-3-14 to take into account the generation connected at LV and MV. The first priority is for IEC 61000-3-14, because a lot of distributed generation is connected at LV. The revision of IEC 61000-3-6, 61000-3-7 and 61000-3-13 will be done in a second stage.
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610 **D.16 Gap 27 – Other 2 – (Revenue metering) Harmonisation between IEC 62056-XX (DLMS/COSEM) and other**
611 **standardised (or on-going to be) revenue metering data model such as Meters&More, OSGP**

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613 Dashboard to be completed

614 **D.17 Gap 13 – T1 – HV-DC grid architecture**

615 Dashboard to be completed
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617   **Annex E Comments received (not resolved yet)**

618   Here is, for information, the list of comments which were received after the circulation of the report by Nov
619   10th 2011.
620   These comments will now enter a resolution process. The conclusions of this process will be progressively
621   reflected in the core part of this report.

622 ## E.1 CLC TC8X

623 The SGCG work programme, with regards to the works involving TC8X – specially gaps 11-12 and 6, was discussed yesterday during the TC8X plenary meeting
624 together with Laurent Guise. There were no substantial comments and target dates are consistent with TC8X programme of work.
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626 ## E.2 CLC TC13

Date		Document SGCG – WG FSS – Standardisation work programme

627

Organization	Line number	Clause/ Subclause	Paragraph Figure/ Table	Type of comment (General/ Technical/Editorial)	COMMENTS	Proposed change	OBSERVATIONS WG FSS
CLC TC13	212	A.2 Com-1		General	There are several issues combined / mixed here:	Reformulate the paragraph to distinguish the three issues.	
CLC TC13	212	A.2 Com-1		General	1) Specifying new standards / Technical reports for new communication technologies and integrating these in a common, interoperable framework. The work plan of TC13 WG02 includes the specification of TSs for the lower layers (PHY + MAC) and the DLMS/COSEM profiles for PLC OFDM Type 1 /Prime) and PLC OFDM Type 2 (G3). A new technology, CX1 has been recently proposed. All these technologies use the common application layer and data model IEC 62056 DLMS/COSEM. TC13 is working on bringing the SMITP (Meters&More) and the OSGP proposals under the framework of the existing standard IEC 62056 DLMS/COSEM.	Amend the information.	

Organization	Line number	Clause/ Subclause	Paragraph Figure/ Table	Type of comment (General/ Technical/Editorial)	COMMENTS	Proposed change	OBSERVATIONS WG FSS
CLC TC13	212	A.2 Com-1		General	2) EMC issues: Narrow band PLC technologies in Europe use the band between 3 to 148.5 kHz. The use of this band for PLC is covered by EN 50065-1:1991, *Signalling on low-voltage electrical installations in the frequency range 3 kHz to 148,5 kHz – Part 1: General requirements, frequency bands and electromagnetic disturbances.* For this range, the EMC standards, mainly developed by SC 77A have no requirements and test methods. This is an important gap that has to be filled (not only due to PLC, but also and more importantly due to non-linear loads generating noise in this band). CENELEC TC13 WG01 is developing a TR for immunity of meters to common mode conducted disturbances in this range, as well as test methods. IEC TC13 and IEC SC77A have also established a liaison to coordinate activities for the development of standards in this range.	Add info on EN 50065-1. Add info on CLC TC13 WG01. Add info on IEC TC13 / SC77A liaison.	
CLC TC13	212	A.2 Com-1		General	3) There are several committees active in PLC standardization: IEC TC57, CLC TC13, ETSI PLT, ITU-T, IEEE. Recently IEC TC57 WG09 has been re-activated. Their activities need to be co-ordinated to avoid development of conflicting standards. See also comment on D.9 Com-2.	Mention also IEC TC57 WG09 concerning standardisations of PLC lower layers to cover the needs of both smart metering and smart grids.	
CLC TC13	268	A.5 Gen-2		General	IEC TC57 and IEC TC13 have agreed to set up a Joint Working Group in order to harmonize the IEC 61968 CIM models and messages and the IEC 62056 DLMS/COSEM models and messages. Information on this work and a call for experts has been launched by IEC TC13 on the 25th November 2011, as the JWG will operate under TC13.	Add the information under Work Program detail, Gap 9 (see relevant comment later)	

Organization	Line number	Clause/Subclause	Paragraph Figure/Table	Type of comment (General/Technical/Editorial)	COMMENTS	Proposed change	OBSERVATIONS WG FSS
CLC TC13	332	A.7 Dis-4		General	The IEC 62056 standard suite developed by TC13 already specifies data access security and data transport security. For the latter, security algorithms and methods using 128 bit symmetric key security based on NIST and FIPS standards have been specified. TC13 is working now to extend this with 256 bit symmetric key algorithms and public key algorithms using elliptic curves using the NSA Security Suite B. Requirements have been formulated based on NISTIR 7628. TC13 agrees that the activities of TC13 need to be synchronised with that of TC57. See also our comment on Gap 18.		
CLC TC13	352	A.8 SM-1		General	The title is not coherent with the contents: while the title mentions both IEC 61850 and CIM (IEC 61970 and IEC 61968), the text mentions only IEC 61968-9, which has not much to do with IEC 61850, which is a different data model from CIM and the harmonization of this two is covered in Gap 8. CLC TC13 wishes to add the following information: CLC TC13 and CEN TC294 are working together to further harmonize IEC 62056 DLMS/COSEM and EN13757-1 (DLMS/COSEM has been already referenced in the first edition of EN 13757-1:2002. Concerning harmonization between data models for the metering domain and CIM. See our comment on A.2 Com-1. Concerning harmonization between DLMS/COSEM and IEC 61850, TC13 is investigating the best path to follow.	Align the title with the text.	
CLC TC13	435	A.12 Other-1		General	CLC TC13 supports the harmonization of CIM and IEC 61850 and the harmonization of IEC 62056 DLMS/COSEM with these.		

Organization	Line number	Clause/ Subclause	Paragraph Figure/ Table	Type of comment (General/ Technical/Editorial)	COMMENTS	Proposed change	OBSERVATIONS WG FSS
CLC TC13	440	A.12 Other-2		General	IEC TC13 has already published standards for data model, application layer and data security mechanisms for smart metering: This is the IEC 62056 DLMS/COSEM standard series providing a framework for accommodating new communication technologies through defining communication profiles. The objective of CLC TC13 WG02 is to use the framework provided by IEC 62056 – with extensions where necessary - to cover new applications and to accommodate new communication technologies. This is already the case with CLC/prTS 50567 part 1, PLC OFDM Type 1 (Prime) and part 2, PLC OFDM Type 2 (G3) and with the newly proposed CX1. M&M and OSGP have been recently offered for standardization and taken up by TC13 WG02. These specifications have been developed in a closed process and they have been optimized for particular applications. Therefore their coverage is limited: • Meters&More supports only B-PSK PLC for data exchange between concentrators and electricity meters with associated displays and IPv4 for data exchange between concentrators and head end systems • OSGP supports only PLC between concentrators and electricity meters • None of these technologies support all interfaces specified by the M/441 SM-CG and they do not support gas, water and heat metering. Note, that although OSGP can handle M-Bus devices, the data related to non-electricity metering are not modelled. This makes harmonization between the COSEM, Meters&More and OSGP model difficult if not impossible. Standardizing three conflicting data models is clearly not an option. TC13 sees the value of the PLC technologies proposed by SMITP (Meters&More) and OSGP, and believes that it is best to spend the resources on bringing SMITP / Meters&More and OSGP under the IEC 62056 DLMS/COSEM framework, which has been developed in an open, transparent process, covers a wide range of energy types, applications and communication media and which is globally used.	Change this task from "Harmonisation between IEC 62056-XX DLMS/COSEM and other standardized (or on-going to be) revenue metering data model such as Meters&More, OSGP. To "Bring the SMITP / Meters&More and OSGP proposals in the IEC 62056 DLMS/COSEM interoperable framework."	

Organization	Line number	Clause/ Subclause	Paragraph Figure/ Table	Type of comment (General/ Technical/Edito rial)	COMMENTS	Proposed change	OBSERVATIONS WG FSS
CLC TC13	529	D1. Gap 9			Concerning harmonization of CIM and DLMS/COSEM, CLC TC13 wishes to provide the following information: - The relevant committee in TC57 is WG14 - The Technical Report will be developed by a TC13 / TC57 JWG under TC13, led by Don Taylor. - A call for experts has been circulated by the IEC on 25th November 2011 - The deadline to prepare the TR is December 2012.	Amend the tables with this information.	
CLC TC13	529	D1. Gap 9			Concerning the harmonization between IEC 61850 and DLSM /COSEM both providing data models for field devices, the best approach is under consideration. This work may be also affected by Gap 8. Harmonization between CIM and IEC 61850.		
CLC TC13	536	D.2 Gap 10		General	TC13 is mentioned among the involved bodies, but not among standards and not in the action plan.	Clarify the role of TC13.	
CLC TC13	547	D4 Gap 18			TC13 supports the harmonization of activities between TC57 and TC13 concerning cyber security. TC13 has developed / is developing its requirements based on NISTIR-7628 and uses NIST / FIPS security standards. Both CLC TC13 WG02 and IEC TC13 WG14 are mentioned here, but later it is indicated that IEC 62056 is seen as not in the Scope. TC13 does not agree with this.	Clarify the role of TC13 and related activities.	

Organization	Line number	Clause/Subclause	Paragraph Figure/Table	Type of comment (General/Technical/Editorial)	COMMENTS	Proposed change	OBSERVATIONS WG FSS
CLC TC13	552	D.5 Gap 11-12 Gen-4 Gen-5		General	CLC TC13 WG02 has to be involved in this, as there is always a meter between DER and the grid. CLC TC13 sees the following issues: • Metering configuration: Use of one bidirectional meters, one two-element meter per direction, or two separate meters; • Coordination of meter ratings with protection ratings and characteristics: e.g. overcurrents, fault currents, speed of operation of protection; • Controlling the supply and generation ; • Extension of COSEM model for DER; • Effect of noise generated on operation of meters and on PLC communication; • Measurement of power quality: co-ordination with TC85 (liaison is being established)	Further discuss these elements and develop a work plan.	
CLC TC13	557	D.6 Gap 26 Other-1		General	CLC TC13 and ETSI M2M are discussing the use of service capabilities proposed by ETSI M2M for smart metering, and their potential impact on the standard developed by TC13 for data models and messaging .		
CLC TC13	573	D.9 Gap 3 Com-2		General	CENELEC TC13 WG02 has active work items and pending new work item proposals to develop Technical Specifications for PLC technologies: - CLC/prTS 50567-1 PLC OFDM type 1 (Prime) lower layers - CLC/prTS 50567-2 PLC OFDM type 1 (G3) lower layers - CLC /prTS 50568-4, Physical layer based on B-PSK modulation + Data Link Layer - OSGP : a companion specification of EN 14908 - CX1 : lower layers Prime and G3 are also being promoted to ITU-T. CLC TC13 WG02 has raised the need for co-ordination with the CENELEC Management.	Add these items to the standard status.	
CLC TC13	578	D.10 Gap 22 SM-3		General	On its meeting in Melbourne on 11-10-29, TC13 decided to add DC metering for e-mobility purposes. TC13 also co-operates with IEC TC69 *Electric road vehicles and electric industrial trucks* (who are not mentioned here).	Add this information and add TC69 to the involved bodies.	
CLC TC13	583	D.11 Gap 23 Ind-3		General	TC 13 agrees with the need to co-ordinate with TC205.		

Organizatio n	Line number	Clause/ Subclause	Paragrap h Figure/ Table	Type of comment (General/ Technical/Edito rial)	COMMENTS	Proposed change	OBSERVATIONS WG FSS
CLC TC13	588	D.12 Gap 25 Ind-5		General	This may have an impact on IEC 62052-31: *Electricity metering equipment (AC) – General requirements, test and test conditions – Part 31: Product safety requirements.* This draft standard references standards from TC64 *Electrical installations and protection against electric shock* (IEC 60364) and TC109 *Insulation co-ordination for low-voltage equipment* IEC 60664 (TC109 is not mentioned her)	Add TC109 and TC13.	
CLC TC13	593	D.13 Gap 5			TC13 has established a liaison with SC77A to address the gap in the frequency range 2-150 kHz.		
CLC TC13	598	D.14 Gap 6 EMC-2		General	Measurement of power quality is a function often present in smart meters. IEC TC13 is establishing a liaison with IEC TC85.	Add TC13.	
CLC TC13	603	D.15 Gap 7 EMC-3		General	This should be considered together with Gap 5. The work of CENELEC TC13 WG01 to develop a TR for immunity requirements and test methods for conducted disturbances in the range of 2 to 150 kHz has been prompted by such problems.	Add also (or bring) here prTR50XX. Electricity metering equipment…. from Gap 5.	
CLC TC13	608	D.16 Gap 27 Other-2		General	See our comment at A.12. See the Dashboard template completed below		

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Gap ID

Gap nb	27		SDO leader1	CLC TC13 WG02				Update date	Last update of the dashboard
Gap ref	(refer to (3) - annex A)		TF leader	(people acting as ..)					
Gap title	Bring SMITP / Meters&More) and OSGP in the IEC62056 framework		**Involved bodies**	CLC	TC13 WG02				
				IEC	TC13 WG14				
Gap details	Revision of the SMITP (Meters&More) proposal CLC/prTS 50568 to specify how the								

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	IEC 62056 Application layer and data model can be used over the lower layers specified.							

Standard status

	Standard title	SDO	Technical body	Standard reference	Target std type	Expected work	Impact on Standard	starting status (dashboard start)	current status
Involved standards	Standard impacted by this action plan	Body in charge of managing this standard			{Report/TR /TS, IS}	Action plan expected added value {Creation, Boost/ Follow-up}	Formal expected impact of the action {creation of /revision of a standard }	The formal document status at the start of the action{CD, CDV, FDIS, IS, …}	The current status of the document {same as beside}
	CLC/prTS 50568 ELECTRICITY METERING DATA EXCHANGE – THE SMART METERING INFORMATION TABLES AND PROTOCOLS (SMITP) SUITE Parts 2, 4, 5, 6, 8 and 9	CLC	TC13 WG02		TS		Revision	2012-02	Planning
	CLC/prTS 50XXX OSGP	CLC	TC13 WG02		TS		Revision	2012-02	Planning
	IEC 62056 ELECTRICITY METERING DATA EXCHANGE – The DLMS/COSEM SUITE – parts 5-3, 6.1 and 6-2	IEC	TC13 WG14		IS			2012-02	Planning

Action plan and follow-up

Main steps	Steps content	who (Body)	who (people)	Initial targetted date	Current targetted date	step status update		
						Status	When	Information
1	Review the CLC/prTS 50568 to define how the lower layers can be used with DLMS/COSEM on top.	CLC TC13 WG02	Meters&More Assn. experts to be named	2012-12				
2	Review the IEC 62056-5-3, 6-1 and 6-2, to accommodate the Meters&More B-PSK technology : new COSEM interface classes, new OBIS codes to manage B-PSK PLC	CLC TC13 WG02	Gyozo Kmethy, Convenor TC13 WG02 Meters&More Assn. experts	2012-12				
3	Review the OSGP specification to define how the lower layers can be used with	CLC TC13	OSGP experts to be					Following the closing of comments on 13/0045Sec/Q on 2011-07-15,

	DLMS/COSEM on top.	WG02	named					no experts have been nominated yet.
4	Review the IEC 62056-5-3, 6-1 and 6-2, to accommodate the OSGP lower layer technology : new COSEM interface classes, new OBIS codes to manage B-PSK PLC	CLC TC13 WG02	Gyozo Kmethy, Convenor TC13 WG02 OSGP experts					

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630   **E.3 CLC TC38**

Date	Document
2011/11/23	SGCG – WG FSS – Standardisation work programme

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Organization	Line number	Clause/ Subclause	Paragraph Figure/ Table	Type of comment (General/ Technical/Editorial)	COMMENTS	Proposed change	OBSERVATIONS WG FSS
CLC/TC 38				General	In many parts of the document the need for filling gaps involving measurement/monitoring/protection aspects is emphasized. Whenever measurement is not performed by direct insertion, instrument transformers are required. IEC and CLC TCs 38 are at present committed to rearrange and to renew their main families of standards, in order to make them ready in the smart grid framework. Some gaps have been identified by TC 38 (digital interfaces, communication protocols, power quality...) and work is in progress in order to prepare the relevant Standards. Some gaps to be filled by TC 38 are identified in the report but this classification seems more tied to the single contributors' experience than to uniform criteria.	CLC TC 38 is at SGCG disposal in order to help in achieving a better tuning, clarifying all the present gaps and reporting what has been started and what has possibly still to be done.	
CLC/TC 38	317	A.6		Editorial	CLC/TC38X changed name into TC38: it is therefore necessary to specify the standardization body involved (IEC or CENELEC) here and in the following occurrences	Change "TC 38" to "IEC TC 38"	
CLC/TC 38	450	Annex C		Editorial	The first 15 pages are not numbered and it is therefore difficult to find the references	Apply a suitable numbering to the first 15 pages	

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E.4 CLC TC57

635 A specific meeting was set –up, on Oct 21st, to follow-up the M490 activities, and the main contributions of CLC TC57 were analysed. CLC TC57 strongly
636 supports the SGCG programme of work. No comments were braught. (Ref TC57_Sec0006_RM_Telco_Meeting_Minutes.pdf)

E.5 CLC TC99

		Date	Document SGCG – WG FSS – Standardisation work programme

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Organization	Line number	Clause/ Subclause	Paragraph Figure/ Table	Type of comment (General/ Technical/Editorial)	COMMENTS	Proposed change	OBSERVATIONS WG FSS
TC 99X				General	TC 99 X is in charge of the standardisation of high voltage installations. His scope is mainly concentrated on safety aspects and he is not, for the moment, directly concerned by the SmartGrid standardisation program. However, we may expect that at a later stage, when functional specifications related to gaps 11, 12 and 25 will be available, TC 99X may have to adapt some installation rules according to the intended evolutions. Until this moment TC 99X can stay on a second row in the SmartGrid program.		

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E.6 CLC SC205A

		Date	Document SGCG – WG FSS – Standardisation work programme

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Organization	Line number	Clause/ Subclause	Paragraph Figure/ Table	Type of comment (General/ Technical/Editorial)	COMMENTS	Proposed change	OBSERVATIONS WG FSS

Organizati on	Line number	Clause/ Subclause	Paragraph Figure/ Table	Type of comment (General/ Technical/Editorial)	COMMENTS	Proposed change	OBSERVATIONS WG FSS
SC205A 1				General	SC 205A welcomes the SGCG Report Programme of standardisation work for the Smart Grid v1.1 2011-11-20 and supports in particular item A4. – EMC1	None	
SC205A 2	239	A.4 EMC-1		General	Being aware of this quite general EMC problem since an early stage, SC 205A, has provided the mentioned Study Report SC205A/Sec0260/R, April 2010; with regard to the recognized need for more detailed knowledge, SC 205A has started further investigations to provide additional information in an extended Study Report; that – related to types of equipment relevant for EM disturbances in the frequency range 2 – 150 kHz, – concerning interference effects and – in particular related to interference mechanisms. The primary goal is to provide support to related activities for closing the gap in standardization.	None	
SC205A 3	562		D9 Gap 3 – Com-2	Technical/edito rial	The table in item D.9 Gap 3 – Com-2 – Harmonize activities on data transport technologies references EN 50065-7, Signalling on low-voltage electrical installations in the frequency range 3 kHz to 148,5 kHz - Part 7: Equipment impedance. The first reference is under "Involved standards" and the second under "step 3". In both cases SC205A believes this should reference EN 50065-1. In the reference under step 3, TC210 should also be referenced.	Change EN 50065-7 to EN 50065-1 (each occurrence). For Step 3, "who" also add TC210.	
SC205A 4	578		D.13 Gap 5		The reference to TC205A should be SC205A	Change TC205A to SC205A	Done

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E.7 CLC TC210

"Thank you for copying this to us. I haven't had a chance to discuss this with Christian yet, but I am mindful of deadline being today, so please accept this interim response from me only.

TC210 has responsibility for items mentioned in Annexes A2 and A4, and we will be pleased to cooperate in the activity where appropriate. It should be borne in mind that some standards that may be involved are parallel-voted international standards and therefore we should be mindful of the Dresden Agreement.

The next meeting of TC210 will be held on 6 - 7 December 2011, and the document has been circulated to TC210 National Committees. We will advise you of any comments that are made at our meeting. I hope this slightly later response will not cause you problems."

E.8 DKE

Extract from DKE Ref 767_Comments on SGCG docs concerning M 490.doc

Date	Document
2011-11-25	SGCG – WG FSS – Standardisation work programme

Organization	Line number	Clause/ Subclause	Paragraph Figure/ Table	Type of comment (General/ Technical/Editorial)	COMMENTS	Proposed change	OBSERVATIONS WG FSS
01				General	The German National Committee regards the deliverables as comprehensive and complete. It provides a good overview about intended standardisation work. Please find our observations to Gap 5 – EMC 1 in the subsequent comments. For the time being we do not request changes or supplements to existing information		

Organizati on	Line number	Clause/ Subclause	Paragraph Figure/ Table	Type of comment (General/ Technical/Editorial)	COMMENTS	Proposed change	OBSERVATIONS WG FSS
02		Gap 5 – EMC 1		General	Compatibility & interoperability in between electric and electronic equipment via LV AC mains installations and grids Concerning the determination of emission requirements in the range below 150 kHz and identification of (involved) harmonized European EMC generic, product family and/or product emission standards which may have to be supplemented with these requirements, the German NC confirms its previous position. In our opinion, interoperability (or better compatibility) at power frequency level between equipment connected to the same LV AC mains installation or between equipment and the respective LV AC mains distribution network is granted to the necessary extent also in future provided this equipment meets the essential emission requirements specified in applicable harmonized European EMC emission standards. From this perspective a general approach supplementing each existing emission standard with requirements below 150 kHz is not justified. The German NC prefers to continue with common practice meaning that respective emission standards will only be supplemented if there is a proof that mutual interaction between certain types of electric or electronic DER equipment connected to the same LV AC mains installation becomes a serious general problem by degrading systematically the performance of other types of equipment connected to the mains. For further findings the German NC relies on the results of the work in the CISPR/SC77A JTF.		

Organization	Line number	Clause/ Subclause	Paragraph Figure/ Table	Type of comment (General/ Technical/Editorial)	COMMENTS	Proposed change	OBSERVATIONS WG FSS
03		Gap 5 – EMC 1		General	Compatibility & interoperability for IT equipment communicating via LV AC mains installations and grids The German NC supports any efforts to adjust existing standards for MSS and/or narrow-band communications via power lines in the range below 150 kHz, to the needs of upcoming Smart Grid or Smart Metering system concepts if this leads to more effective, secure and reliable interoperability of the respective services and applications via LV AC mains distribution networks. However, also here the German NC cannot discover so far any need to mitigate further disturbances in the range below 150 kHz observed in the network and originating from other electric and electronic or DER equipment connected to the same network. If necessary and required by the community, the communications standards shall be improved, but without imposing obstacles to other branches of industry meaning that the existing level of man-made noise in the range below 150 kHz in existing modern LV AC mains grids shall be taken into account accurately when developing and maintaining respective communication standards.		

Organization	Line number	Clause/ Subclause	Paragraph Figure/ Table	Type of comment (General/ Technical/Editorial)	COMMENTS	Proposed change	OBSERVATIONS WG FSS
04	215-220	A2		Technical	The German NC appreciates to include all available PLC technologies into the consideration, as these technologies are already deployed in field trials and first Smart Grid roll-outs. However, the text provided here is somehow confusing: - Narrow band OFDM = frequency range below 550 kHz; - Broadband IEEE activity is a standard now – in consequence IEEE 1901 without the "P") and somehow incomplete: - narrowband standardization of IEEE P1901.2 is not mentioned.	**Change** "For PLC communication the use of the frequency range up to 540 kHz should be specified, subject to protecting existing users of these frequencies for radio communication and other purposes. For broadband PLC we recommend that where applicable and no alternative standard inside ETSI/CEN/CENELEC can be found the IEEE P1901 should be taken into account. Work with the ETSI PLT TC committee to evaluate the use of ITU-T PLC Narrow band OFDM G.9955." **To** "For PLC communication the use of the frequency range up to 540 kHz should be specified, subject to protecting existing users of these frequencies for radio communication and other purposes. Where applicable and no alternative standard inside ETSI/CEN/CENELEC can be found the IEEE P1901.2 and ITU-T PLC Narrow band OFDM G.9955 should be considered. For broadband PLC we recommend that where applicable and no alternative standard inside ETSI/CEN/CENELEC can be found the IEEE 1901 should be taken into account."	

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