

SUMMARY OF ACTIVITIES CARRIED OUT BY THE ACC-CG

Mandate Adaptation to climate change M/526

One of Europe's priority areas in dealing with the changing climate is the resilience of key infrastructures in society. From this perspective, the EU mandated a project to CEN/CENELEC in 2014 (M/526) directed at including climate change adaptation in standards for buildings and the energy and transport infrastructures.

At the European level, work on standards integrating climate change formally started with the set-up of the Adaptation to Climate Change Coordination Group (ACC-CG) in early 2015. The standardization approach at the European level is sectoral, with elements of horizontal coordination (such as a guide for standards writers). In line with standardization request "Adaptation to Climate Change" (M/526¹), the ACC-CG supports several infrastructure-related TCs in the revision and development of infrastructure standards that are climate resilient. The work of the Coordination Group is part of one of the cornerstones of Europe's adaptation strategy: enhancing resilience of key infrastructures to the effects of a changing climate.

The mandate focuses on three sectors: buildings, infrastructures in the energy sector and infrastructures in the transport sector. In the 1st phase of the standardization request, TCs selected 12 standards which would be relevant for revision or new development in regard of climate change, and a 13th from ETSI was added later on. In the 2nd phase, which started at the end of 2017, TCs are actually working at revising the standards. In parallel, CEN-CENELEC Guide 32 'Guide for addressing climate change adaptation in standards' (2016)² and a draft tailored guidance document have been developed that support TCs in revising standards with regard to climate change

As awareness on and knowledge about the impacts of climate change on our society is growing fast, it also becomes clear that European standards can play a vital role in sectors related to the ones identified in the first mandated project. Therefore a set of activities additional to the ongoing mandate were taken on. It focuses on three areas:

I. *Linking standards for infrastructures to future climatic conditions;*

From the previous work undertaken under the standardization request, it is clear that this kind of information is of critical importance in order to address CCA in standards. In parallel it is clear that knowledge about the future climate is developing fast, especially in the framework of the EC's C3S-programme ([Copernicus Climate Change Services](#)). This activity will also link to the Eurocodes, the set of EN standards directed at safety of construction works, which is broadly used both inside and outside of Europe. The proposed activities aim at preparing the ground for a Technical Report (a first stage standards), that provides guidance for systematic use of future climate information in national annexes to the Eurocodes.

¹ For more information on the standardisation request M/526, see: www.ec.europa.eu/growth/tools-databases/mandates/index.cfm?fuseaction=search.detail&id=546#

² CEN-CENELEC Guide 32 ('Guide for addressing climate change adaptation in standards') is available at: ftp://ftp.cencenelec.eu/EN/EuropeanStandardization/Guides/32_CENCLCGuide32.pdf

II. *Scaling adaptation measures to the European level;*

Adaptation measures are concrete measures that can be used to prevent or mitigate some of the adverse effects of climate change, such as extreme weather conditions. Examples are swales ('wadi'), green roofs and permeable pavements. A library of more than 100 adaptation measures has been constructed in the framework of the Horizon 2020 RESIN-project, including links to existing standards and technical specifications.³ This showed that in several cases useful national industry specifications are available, but not on the European level. Therefore, this activity focuses on identifying where European standards can help the future market acceptance and implementation of these measures. Where such needs are identified, steps follow to come to development of these standards.

III. *Adoption of CCA in other standards for infrastructures;*

This third activity is directed at other infrastructural standards that are not yet part of the current set of standards in revision. An important element is that compared to the situation in earlier years when a screening activity was previously undertaken, awareness about CCA has grown substantially across Europe, and tools and information have become more readily available.

The activities are carried out alongside the ongoing revision of the 13 standards in three subgroups that report to the ACC-CG: the ACC-TC platform continuing activities of the existing work programme and two project-teams. The work is guided on headlines by the ACC-CG. Together these activities will help in producing the building stones for a more structural inclusion of CCA in a broad range of infrastructures, installations and buildings across Europe.

Overview of Technical Committees and standards involved

TC	Name	Standard(s)	Title
building sector			
CEN TC 89 / ISO TC 163	Thermal performance of buildings and building components	EN ISO 15927 4	Hygrothermal performance of buildings – Calculation and presentation of climatic data
CEN TC 156	Ventilation for buildings	FprEN 16798 1, 2, 3, 4;	Energy performance of buildings - Part 1: Indoor environmental input parameters for design and assessment of energy performance of buildings addressing indoor air quality, thermal environment, lighting and acoustics - Module M1-

³ To access the library, see: <https://resin-cities.eu/resources/library/>

TC	Name	Standard(s)	Title
			6. Part 3: Ventilation for non-residential buildings - Performance requirements for ventilation and room-conditioning
	<i>added</i>	CEN/TC 156/WG 20, Preliminary (WI=00156256): Natural and hybrid ventilation systems in non-residential buildings;	
	<i>added</i>	CEN/TC 156/WG 21, Preliminary (WI=00156257): Ventilative cooling systems	
CEN TC 350	Sustainability of Construction Works	EN 16309 prEN 15978-2 (<i>new number</i>)	Sustainability of construction works - Assessment of social performance of buildings - Calculation methodology
		prEN 17472	Sustainability of construction works — Sustainability assessment civil engineering works — Calculation
CEN TC 371	Project Committee - Energy Performance of Building project group	EN ISO 52000-1	Energy performance of buildings - Overall energy use and definition of energy ratings
	<i>added</i>	CEN/TS 16628	
	<i>added</i>	CEN/TS 16629	
energy sector			
CEN TC 234	Gas Infrastructure	EN 16348	Gas infrastructure. Safety Management System (SMS) for gas transmission infrastructure and Pipeline Integrity Management System (PIMS) for gas transmission pipelines. Functional requirements
		EN 15399	Gas infrastructure. Safety Management Systems for gas networks with maximum operating pressure up to and including 16 bar

TC	Name	Standard(s)	Title
CEN TC 282	Installation and equipment for LNG	EN 1473	Installation and Equipment for LNG – Design of Onshore Installations
ICT infrastructures			
CLC TC 215	Electrotechnical aspects of telecommunication equipment	EN 50600-2-3 and 50600-2-5	Information technology. Data centre facilities and infrastructures - Part 2-3: Environmental control; part 2-5: security systems
transport sector			
CLC TC 9X	Electrical and electronic applications for railways	EN 50125 -2	Railway applications - Environmental conditions for equipment - Part 2: Fixed electrical installations
CEN/TC 274	Aerospace	EN 1915-1 and 1915-2	Aircraft ground support equipment
Telecommunications sector			
ETSI	Telecommunications equipment	EN 300 019-x-y series	Environmental conditions and environmental tests for telecommunications equipment