

Association for Indoor Climate, Process Cooling, and Food Cold Chain Technologies



Building Bridges





Building Bridges





Good to know

What can you expect today?



Good to know Wednesday, 26 October 2022



WHEN?	WHAT?	WHERE?
11:00-11:30h 15:30-16:00h	Coffee Break	Foyer (Floor 1)
12:45-13:45h	Lunch Break (<u>Powered by ISIB</u>)	Meeting room Ladin + Foyer (Floor 1)
09:30-12:45h	ISKID/TTMD Seminar: New technologies and trends in HVACR – Part 2 (in Turkish and English) (Powered by Eurovent Certified Performance)	Side Ballroom (Floor 1)
19:00h	Gathering for Eurovent Innovation/HUB (Powered by UL Solutions & J2 Innovations) PLEASE BE ON TIME	Hotel lobby



Good to know

Wednesday, 26 October 2022



Eurovent Innovation/HUB (Powered by UL Solutions & J2 Innovations)

- Starts at 19:45h
- Gathering at 19:00h in the hotel lobby, bus transport to the venue.
- Get inspired by visionary, TED-style manner keynote presentations from leading personalities from the HVACR industry and beyond.
- Enjoy a cocktail dinner at the after-show party in a unique traditional location Anadolu Park.





Thank you to our sponsors and partners

Who made the 2022 Eurovent Summit possible?



Co-organiser





 ISKID is the Turkish Air Conditioning and Refrigeration Manufacturers' Association. ISKID was established in 1992 with the contributions of prominent companies in the air conditioning and refrigeration sector, to conduct work towards making the HVACR Industry development healthier and faster. Over 100 member companies are gathering under ISKID's roof to conduct activities for the development of the sector and to stay in high-quality standards. As this edition of the Eurovent Summit takes place in Turkey, the association has become co-organiser of the event, as well as organiser of a Turkish-English seminar programme.



BridgeBuilding Partner





- <u>UL Solutions</u> is a global leader in applied safety science.
- UL Solutions transforms safety, security and sustainability challenges into opportunities for customers in more than 100 countries.



BridgeBuilding Supporter





 Baltimore Aircoil Company develops, manufactures and distributes evaporative cooling products, offering innovative and sustainable cooling solutions for saving water and energy in air conditioning, refrigeration and industrial process applications.



BridgeBuilding Supporter





 CEIS is a Spanish testing, innovation and service centre offering well-recognised testing programmes for air conditioning and heat pump appliances. This year, CEIS has become a proud supporter of the Eurovent Summit for the third time in a row.



BridgeBuilding Supporter



J2INNOWTIONS

A Siemens Company

- J2 Innovations, a subsidiary of Siemens, is a provider of control and management software for HVAC and refrigeration equipment.
- J2 Innovations created FIN Framework; the next generation software platform for building automation and IoT applications in buildings.



BridgeBuilding Contributor





 ABB is a leading manufacturer of drives, motors and controls for HVACR applications with a global footprint, supporting the industry across the world with products and services.



BridgeBuilding Contributor





 Turkish HVACR Exporters Association (ISIB) is the only coordinator and exporter association in Turkish HVACR sector. Established in 2012, ISIB works towards bringing together all the exporter companies active in the Turkish HVACR sector under one roof and increasing the export potential of the sector.







Boreas Technology engages in manufacturing and sales of DC Master Adia Mechanic Cooler and CRAC/CRAH models which are specially designed for data centres as well DC Pro units, air conditioning units distinguished for their authentic design, and central air- conditioning equipment. With its know-how of more than 20 years, it offers state-of-the-art solutions for critical buildings such as hospitals, malls and hotels as well as industrial buildings and data centres in various countries in the world. As the choice of leading global brands, the company is dedicated to offering technology solutions for a sustainable world with high efficiency, customised products thanks to its R&D investments and engineering know-how.







• FRITERM is one of Europe's leading manufacturers of heat exchangers, providing solutions for industrial applications throughout the EMEA region.







 Systemair is a leading ventilation company with operations in 50 countries globally, manufacturing and market high-quality ventilation products.







 WIKA is a global market leader in pressure, temperature and level measurement technology. Working together with our customers, we develop comprehensive solutions based on our highquality measurement technology components, with the solutions ultimately being integrated in their business processes. We deliver 50 million quality products to over 100 countries every year. Worldwide, approximately 600 million WIKA measuring instruments are in use. WIKA employs around 10.000 people and owns over 40 subsidiaries worldwide. For the third time in a row, WIKA is proud to support the Eurovent Summit.



Exhibition Partner





 ISK-SODEX Istanbul is an International HVAC, Refrigeration, Insulation, Pump, Valve, Fitting, Water Treatment, Fire Prevention, Pool and Solar Energy Systems Exhibition.



Exhibition Partner





 Climatización y Refrigeración (C&R), an international exhibition in Spain in HVAC and Refrigeration, is one of the most important events which showcases the technological innovation and commitment to sustainability and energy efficiency of this industry.



Thank you to our partners Meet them in the foyer









Meeting of the Eurovent Product Group 'Air Conditioners' (PG-AC)

Wednesday, 26 October 2022, 13:45-16:45, Melissa





About this Product Group

Eurovent Product Group 'Air Conditioners' (PG-AC)



The Eurovent Product Group 'Air Conditioners' covers Air Conditioners and Variable Refrigerant Flow (VRF) Units. It is engaged with European and national legislation regarding the European air conditioning industry. It is also concerned with the development of EN, ISO and Eurovent standards and deals with general promotion of the industry. Another task of this Product Group is regulation of export initiatives and diminishment of unfair trade barriers inside and outside Europe. The group is supported by Eurovent Member Associations on a national level. The Group does not deal with certification.



Henk Kranenberg Daikin Europe NV Chairman





Stefano
Vit
De'Longhi
Appliances s.r.l.
Vice-Chairman

over 30 companies registered from all over Europe



Agenda



- 1. Introduction, meeting rules
- 2. Attendances
- 3. Approval of the Draft Agenda
- 4. Approval of the Minutes of the last meeting
- Updates on Ecodesign and Energy Labelling
- 6. Compensation Method

7. SCIP notification

Coffee break

- 8. F-Gas Regulation
- 9. What's new in IEC 60335-2-40 last 2022 release?
- 10. Environmental Product Declaration (EPD) and Product Category Rules (PCR)
- 11. Upcoming agenda items
- 12. Announcements, updates on Eurovent activities
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1.-4. Formalities



- Introduction
- Rules: Competition law, bribery, corruption and data protection
- Attendances
 - Introduction of participants
 - Remember to sign the attendance list
- Approval of the Draft Agenda
- Approval of the minutes of the last meeting
 - Online, 16 June 2022



4. Approval of the minutes of the last meeting

EUROVENT SUMMIT ANTALYA 25-28 OCT 2022

Formalities (agenda items 1-4)

- 16.06.2022: Meeting called to order at 11:05h; 17.06.2022: Meeting called to order at 10:37h; 20.06.2022: Meeting called to order at 17:32h.
- Meeting agenda unanimously approved
- Minutes of the last meeting unanimously approved

Discussion on the naming and the approach for single and double duct units in view of the Consultation Forum of 24 June 2022

- In view of the CF on 24 June 2022, it was agreed on the below speaking points:
 - o Eurovent cannot say yes or no to the proposed merged label
 - Eurovent invites the EC to ensure the proper granularity for cooling and heating for different products
 - The EC has to clarify why the addendum report for FDD is not retained anymore (in terms of both label and MEPS)
 - MEPS proposed for FDD and SD are to be clarified; it is understood that the MEPS of 2019 would be applied (phasing out FDD and SDD)
 - The granularity of SD is compromised by the testing method which does not allow to show improvements (all the products remain in the very same class); SD (only cooling function) cannot be confined at the very bottom energy class
 - Alternative names for FDD and SD to be suggested by the EC (in order to guarantee a proper differentiation with split units if different labels are envisaged)
 - Conversion to etas (for both heating and cooling function) and indication of labelling scale remain essential



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after the Consultation Forum of 24 June 2022

Background

On 24 June 2022 a Consultation Forum was held by the European Commission to discuss the proposal of possibly merged labelling regulations for room heaters, room air conditioners and comfort fans.

The result of the discussions within PG-AC was a list of speaking points to be voiced during the Consultation Forum and which served as the basis for the Eurovent Position Paper that was developed after the Consultation Forum with the written contributions of Members.

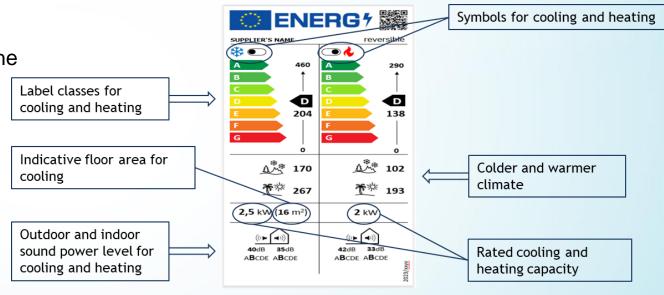




after the Consultation Forum of 24 June 2022

Main contents of the proposal

- For room air conditioners the scope is the same as the regulation it replaces (≤ 12 kW).
- The efficiency of all products is expressed in primary energy efficiency (enabling the comparison).
- New design of the Energy Label







after the Consultation Forum of 24 June 2022

Main contents of the proposal

 Proposed scales (during the Consultation Forum a threshold value of 330 was proposed for the class A seasonal room heating efficiency):

Energy label

Energy label class for room heaters	Seasonal room heating efficiency η _h
Α	η _h ≥ 290
В	$240 \le \eta_h < 290$
С	190 ≤ $η_h$ < 240
D	$120 \le \eta_h < 190$
E	$90 \le \eta_h < 120$
F	$75 \le \eta_h < 90$
G	η _h < 75

Energy label class for room air conditioners	Seasonal room cooling efficiency η _c
Α	η _c ≥ 550
В	395 ≤ η _c < 550
С	295 ≤ η _c < 395
D	$215 \le \eta_c < 295$
E	$160 \le \eta_c < 215$
F	$115 \le \eta_c < 160$
G	η _c < 115





after the Consultation Forum of 24 June 2022

Main contents of the proposal

- For room heat pumps and room air conditioners there have been changes in relation to the calculation of seasonal efficiencies SEER and SCOP, considering control options:
- The new formulas for the seasonal efficiency now include a correction of 0,9 which can be boosted to a factor 1,0 if multiple energy saving control features are applied:

$$eta_{rh} = \frac{SCOP}{CC} * \left(0.9 + 0.1 * \sum_{i}^{xii} F_{corr} \right)$$

		Product (sub)group, values in percentage points							
Control factor to sum for Fcorr		electric room heater				heat pump and/or n air conditioner		comfort fan	
	fuel fired room heater	standard ERH	storage ERH	under- floor ERH	single duct	portable split/dd	fixed		
i.	multiple output levels	20%	20%	15%	20%				40%
ii.	modulating output	20%	15%		10%				
iii.	charge limiter			10%					-
iv.	weather dependent charging			10%					-
v.	basic room temperature control	20%	15%	20%	15%	25%	25%	25%	
vi.	programmable room temperature control	10%	15%	15%	30%	15%	30%	30%	
vii.	working time limiter	10%	15%	10%	10%	25%	10%	10%	20%
viii.	room temperature controlled fan air flow rate			-					20%
ix.	presence detection	10%	10%	10%		20%	20%	20%	20%
х.	open window detection	10%	10%	10%		15%	15%	15%	
xi.	black bulb sensor	20%	15%	20%	15%	-	-	-	
Ma	ximum score (Fcorr)	100%	100%	100%	100%	100%	100%	100%	100%





after the Consultation Forum of 24 June 2022

Main contents of the proposal

 New sound scales are proposed, differentiated for outdoor and indoor units:

Outdoor sound power (dB(A))	Sound power label class	Share of models meeting proposed outdoor limits (cumulative)
dB < 52	A	<2% of RACs
52 ≤ dB < 57	В	4% of RACs
57 <u>< dB</u> < 62	С	33% of RACs
62 <u><</u> dB < 67	D	80% of RACs
dB ≥ 67	E	rest, to 100% of RACs

Indoor sound power (dB(A))	Sound power label class	Share of models in EPREL (indoor noise) that meets thresholds
dB < 45	A	<0,5% RACs
45 ≤ dB < 50	В	6% of RACs
50 ≤ dB < 55	C	38% of RACs
55 ≤ dB < 60	D	81% of RACs
dB≥60	E	rest, up to 100%

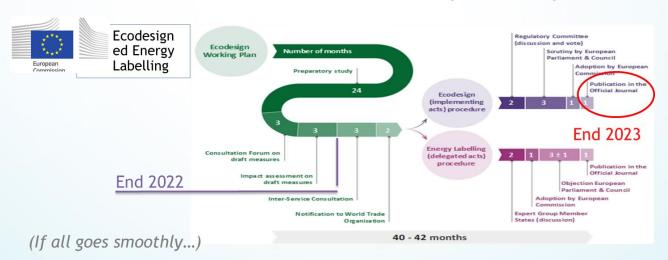




after the Consultation Forum of 24 June 2022

Next steps

The impact assessment should be completed by the end of the year. According to the graph, the publication of the new Regulations, Ecodesign and Energy Labelling, could be done within the end of 2023. The policy officer in charge, Mr. Philippe Rivière, stated during the Consultation Forum that the timelines of Energy Labelling and Ecodesign are aligned.







after the Consultation Forum of 24 June 2022

Next steps

The Impact Assessment is evaluating 3 options:

- 1. Rescaling only
- 2. Rescaling and seasonal approach also for single and double ducts appliances
- 3. Merging of the Energy Label Regulations of local space heaters and room air conditioners



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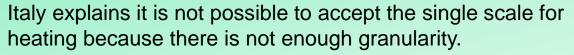
after the Consultation Forum of 24 June 2022

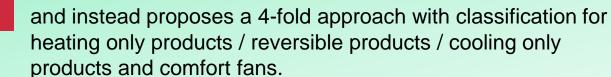
Member States' opinions (summary of position expressed during the CF)



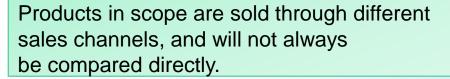
Norway supports the consideration of infiltration air of Single Duct air conditioners

Norway expresses concerns about the bandwidth of classes and does not support the merged labels nor inclusion of electric heaters;





Austria sees option 2 as feasible (combustion local space heaters and electric heating on a single scale) but doubts heat pumps can be added on the same scale.



Portugal shares concerns expressed by Italy and Austria





EUROVENT

after the Consultation Forum of 24 June 2022

Member States' opinions (summary of position expressed during the CF)



Belgium supports the removal of the BLF and defends the single scale. It gives a large efficiency spread and appears as a good tool to save primary energy,

France a priori supports the single scale although wants to see the results of the evaluation of the impacts.

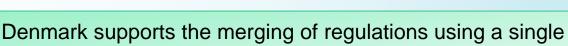


Netherlands is surprised by the requests for more granularity for products that have no inherent granularity such as direct electric heating. NL states the label is about energy efficiency and not other issues/aspects; NL also states that the worst situation would be to end up with every product subcategory having its own A-G scale.

Bulgaria states that more granularity is required.



Germany welcomes the merged label approach



Slovakia states that more granularity is required,

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scale.



5. Updates on Ecodesign and Energy Labelling



after the Consultation Forum of 24 June 2022

Eurovent Position Paper after the CF

- Within Eurovent, it has not been possible to have a common view on the proposed merged energy label.
- Eurovent holds that it is of the most importance to ensure the proper granularity for different products both in heating and cooling functions.
- Without considering the layout of the label or the choice of one or multiple labels/scales, the width of the scales should be designed to allow the best products of each technology to reach a higher-class respect than others of the same technology



5. Updates on Ecodesign and Energy Labelling



after the Consultation Forum of 24 June 2022

Eurovent Position Paper after the CF

- If the Commission, to ensure the granularity, will decide to set up different energy labels between split, single duct and
 double duct air conditioners, then alternative names for Fixed Double Ducts and Single Ducts should be suggested by
 the Commission to guarantee a proper differentiation among these technologies for the end consumers.
- Eurovent would like to stress that the conversion to primary energy (for both cooling and heating function) and the indication of the scale on the label remain essentials.
- Eurovent understood from the Consultation Forum that all the studies conducted so far will be properly taken into account, so we expect that the Ecodesign minimum requirements will be revised accordingly
- Eurovent asks the Commission to align Ecodesign and Energy Labelling formulas, include all the findings from the studies conducted so far into one final draft and circulate it among the stakeholders before the next steps of the Regulations' approval and publication.



5. Updates on Ecodesign and Energy Labelling



after the Consultation Forum of 24 June 2022

Eurovent Position Paper after the CF

- In our understanding the Ecodesign minimum requirements set for Single Ducts in 2019 are still in place, phasing out the 99% of the appliances. The proposed energy label also does not guarantee the granularity within the single duct technology. Having considered that single ducts:
 - are responding to specific market segments with specific consumer needs;
 - are a unique solution where other product categories cannot be installed,

being the proposal Commission lacking in granularity and differentiation for single ducts, a separate scale is proposed in Annex I

Exclude from the scope units not designed for the comfort of human beings



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6. Updates and exchange on BAM activities



Compensation Method

- BAM is a senior scientific and technical federal authority with responsibility to the German Federal Ministry for Economic Affairs and Climate Action (BMWK)
- Speaker: Mr. André Wachau





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7. SCIP notification



 SCIP is the database for information on Substances of Concern In articles as such or in complex objects (Products) established under the Waste Framework Directive



Guest presentation by Ms.
Salvina Murè and
Alejandra Restrepo
of ICIM Group
(Italian independent certification body) on SCIP obligations for manufacturers







Coffee break

Join us in the foyer

See you again in 30 minutes!



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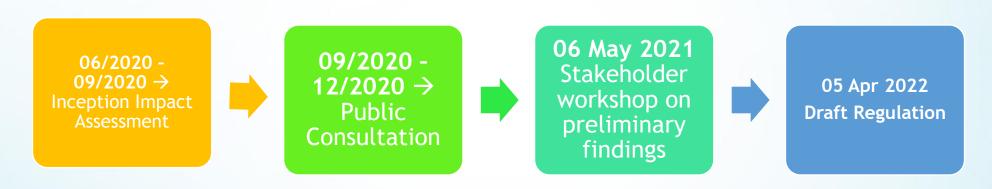
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It's been a quite long process















New EU F-Gas Regulation - Draft 5th April 2022

The Regulation will be directly applicable in all Member States

29th June 2022 deadline for public comment on the "Have your say" portal

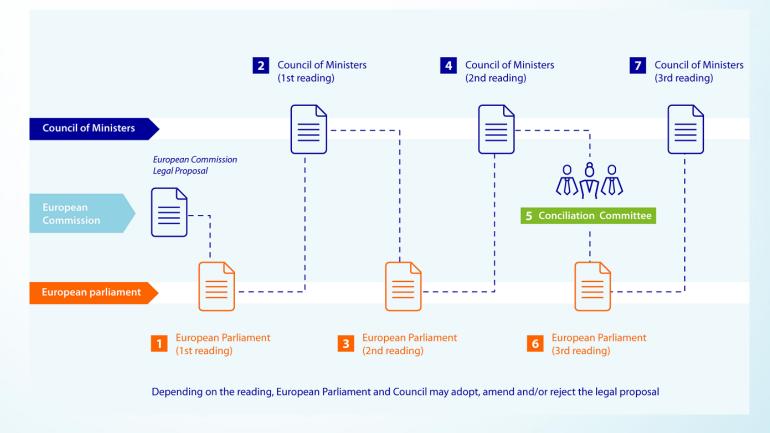
In late autumn the negotiation between Member States and European Parliament will start - now Committees at work

Entry into force expected for beginning of 2024





The Ordinary Legislative procedure



Wednesday, 26 October 2022 Meeting of PG-AC 48



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#Building Bridges

No deadlines

3+1 months EP

3+1 months EC

4+2 weeks EP 4+2 weeks EC

The Ordinary
Legislative
procedure –
more in detail







Key Figures





+ Shadow Rapporteurs



8. Updates on F-Gas Regulation Next steps



- Beginning of October: draft opinion of rapporteurs circulated
- The discussion in the ITRE Committee is foreseen on 26 October.
- 27 October is the deadline for amendments for the ITRE committee
- On 07 November there should be the discussion within ENVI on the report of Mr. Bas Eickhout
- 15 November is the deadline for amendments for the ENVI committee



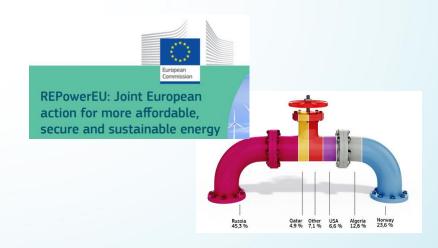


Context



European Green Deal, European Climate Law and the enhancement of the contribution under the Paris Agreement on Climate Change require reinforcing all instruments relevant for decarbonisation of EU \rightarrow -55% GHG emission by 2030 and climate neutrality by 2050.

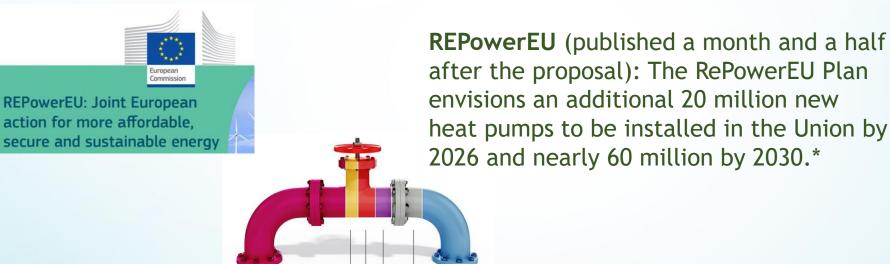
- F-gas emissions amount to 2,5% of EU's total GHG emissions but doubled from 1990 to 2014.
- Kigali Amendment to implement a global HFC phase-down.
- The actual Regulation 517/2014 cannot fully ensure compliance with all the obligations. Nevertheless, the supply of HFCs has declined by 37% in metric tonnes and 47% in terms of tonnes CO₂ equivalent from 2015 until 2019.





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Context



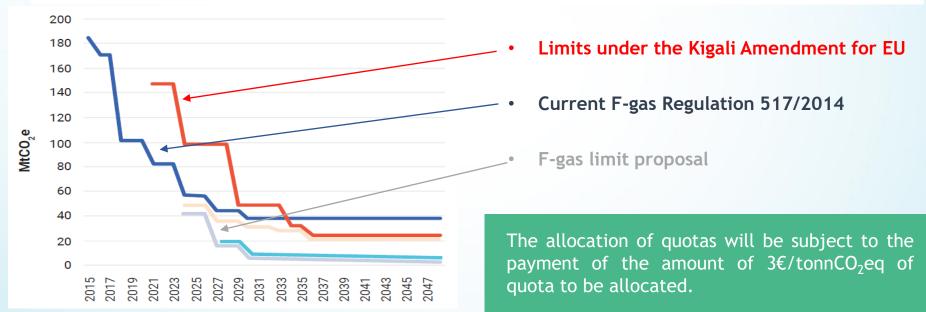
*Source: Amendment 1, recital 4(a) of the draft opinion of the Committee on Industry, Research and Energy. Rapporteur Sara Skyttedal





Main Contents of the draft proposal









Main Contents of the draft proposal

Additional bans on air-conditioners and heat pump equipments.



?	Self-	Contained?	

? Air conditioner vs heat pump?

(17)		Plug-in room and other self-contained air-conditioning and heat pump equipment that contain fluorinated greenhouse gases with GWP of 150 or more.	1 January 2025
(18)		Stationary split air-conditioning and split heat pump equipment:	
	(a)	Single split systems containing less than 3 kg of fluorinated greenhouse gases listed in Annex I, that contain, or whose functioning relies upon, fluorinated greenhouse gases listed in Annex I with GWP of 750 or more;	1 January 2025
	(b)	Split systems of a rated capacity of up to and including 12 kW containing, or whose functioning relies upon, fluorinated greenhouse gases with GWP of 150 or more, except when required to meet safety standards;	1 January 2027
	(c)	Split systems of a rated capacity of more than 12 kW containing, or whose functioning relies upon, fluorinated greenhouse gases with GWP of 750 or more, except when required to meet safety standards.	1 January 2027

? Except when required to meet safety standards?





Main Contents of the draft proposal

3. The GWP of HFCs is based on the Fourth Assessment Report adopted by the IPCC

Substance	GWP
R32	675
R134a	1430
R410a	2088

4. The GWP of HFOs is based on the Sixth Assessment Report adopted by IPCC

Substance	GWP
R1234yf	0,5
R1234ze	1,37



EUROVENT SUMMIT ANTALYA 25-28 OCT 2022

Main Contents of the draft proposal

5. Equipments must be checked for leaks also when they contain HFO refrigerants.

Annex I refrigerants (HFC)	Frequency of leak checks
qty < 5 tonn CO₂eq	-
5 ≤ qty < 50 tonn CO ₂ eq	Every 12 months (24 if leakage detection system installed)
50 ≤ qty < 500 tonn CO ₂ eq	Every 6 months (12 if leakage detection system installed)
qty ≥ 500 tonn CO ₂ eq	Every 3 months (6 if leakage detection system installed)

Annex II refrigerants (HFO)	Frequency of leak checks
qty < 1 kg	-
1 ≤ qty < 10 kg	Every 12 months (24 if leakage detection system installed)
0 ≤ qty < 100 kg	Every 6 months (12 if leakage detection system installed)
qty ≥ 100 kg	Every 3 months (6 if leakage detection system installed)



Main Contents of the draft proposal



- Operators of stationary equipment containing HFCs and HFOs shall ensure that the recovery of those gases is carried out by certified persons and that those gases are recycled, reclaimed or destroyed.
- Any HFCs or HFOs recovered shall not be used for filling or refilling equipment unless the gas has been recycled or reclaimed.
- Member States shall establish or adapt certification programmes, ensure training on practical skills and theoretical knowledge for person dealing with HFCs, HFOs and other relevant alternatives to fluorinated greenhouse gases.





8. Updates on F-Gas Regulation Don't forget PFAS



Substance name 🗘	EC / List no	CAS no 🗘	Status 🗘	Expected date of submission	Submitter(s) 🗢	Details on the scope of restriction
Per- and polyfluoroalkyl substances (PFAS)	-	-	Intention	13-Jan-2023	Germany Denmark Netherlands Norway Sweden	Restriction on manufacture, placing on the market and use of PFAS.

PFAS are defined as substances that contain at least one fully fluorinated methyl (CF3-) or methylene (-CF2-) carbon atom (without any H/Cl/Br/I atom attached to it).





Ongoing Activities

In 2022 the Eurovent Task Force "FGAS" met 11 times, and another meeting is planned for 26 October in Antalya. The last position paper drafted by the TF-FGAS includes a general statement on the historical and unique context in which the revision of this regulation is taking place and a set of amendments to the European Commission's proposal.

The aim of the set of amendments is to contribute to the gradual phasing-down of fluorinated greenhouse gases while leaving enough time and solutions to the industry to reach the goals that Europe set on decarbonisation and consequently deployment of the heat pump technology.





Ongoing Activities

In the meanwhile, the Committees ENVI and ITRE circulated their first documents on the Regulation on Fluorinated Greenhouse Gases proposed by the European Commission. These will also be addressed during the next TF-FGAS meeting.

ENVI draft Report: https://www.europarl.europa.eu/doceo/document/ENVI-PR-737211_EN.pdf

ITRE draft Opinion: https://www.europarl.europa.eu/doceo/document/ITRE-PA-737218_EN.pdf





Eurovent Proposed amendments of relevance for PG-AC

Article 3 – definitions

Original text	Eurovent suggested modification
- (new proposal)	(x) Self-contained equipment
	Complete factory-made refrigerating system in a
	suitable frame and/or enclosure, that is fabricated and
	transported in one or more sections and in which no
	refrigerant containing parts are connected on site
	other than by companion or block valves.

Article 10 – Certification and training (subclause 3)

Original text	Eurovent suggested modification
The certification programmes and training	The certification programmes and training
provided for in paragraphs 1 and 2 shall cover	provided for in paragraphs 1 and 2 shall cover the
the following,	following,
(a) applicable regulations and technical	(a) applicable regulations and technical standards;
standards;	(b) emission prevention;
(b) emission prevention;	(c) recovery of fluorinated greenhouse gases
(c) recovery of fluorinated greenhouse gases	listed in Annex I and Annex II, Section 1;
listed in Annex I and Annex II, Section 1;	(d) safe handling of equipment of the type and
(d) safe handling of equipment of the type and	size covered by the certificate; and
size covered by the certificate; and	(e) energy efficiency and heat recovery aspects
(e) energy efficiency aspects.	





Eurovent Proposed amendments of relevance for PG-AC

Annex IV – subclause 18

Annex IV – subclause 17

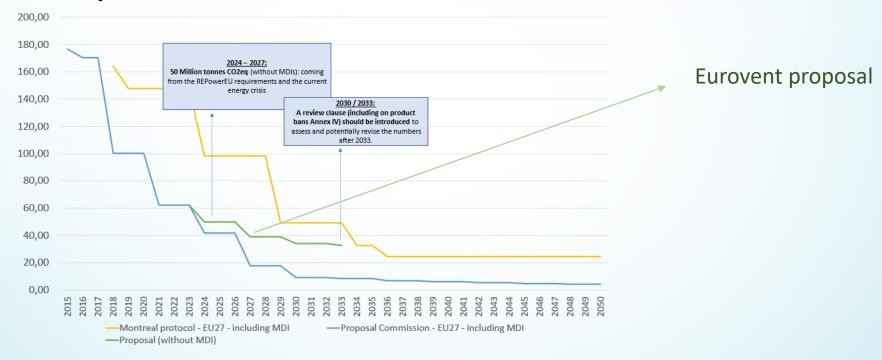
Original text	Eurovent suggested modification
Plug-in room and other self-contained air- conditioning and heat pump equipment that contain fluorinated greenhouse gases with GWP of 150 or more. 1 January 2025	plug in self-contained "comfort air conditioning and heat pump equipment" which is moveable between rooms by the end users that contain fluorinated greenhouse gases with GWP of 150 or more. Date of prohibition: 1 January 2025

Original text		Eurovent suggested modification
Stationary split ai	r-conditioning and split heat pump	Stationary air-conditioning and heat pump equipment:
equipment:		(a) Single split systems and fixed double duct appliances
(a) Single split sys	tems containing less than 3 kg of fluorinated	containing less than 3 kg of fluorinated greenhouse gases listed
greenhouse gases	listed in Annex I, that contain, or whose	in Annex I, that contain, or whose functioning relies upon,
functioning relies	upon, fluorinated greenhouse gases listed in	fluorinated greenhouse gases listed in Annex I with GWP of 750
Annex I with GWF	of 750 or more; 1 January 2025	or more; Date of prohibition: 1 January 2025
		(b) other split and self-contained equipment containing, or
(b) Split systems of	of a rated capacity of up to and including 12	whose functioning relies upon, fluorinated greenhouse gases
kW containing, or	whose functioning relies upon, fluorinated	with GWP of 750 or more. Date of prohibition: 1 January 2030
greenhouse gases	with GWP of 150 or more, except when	
required to meet	safety standards; 1 January 2027	
(c) Split systems o	of a rated capacity of more than 12 kW	
containing, or wh	ose functioning relies upon, fluorinated	
greenhouse gases	with GWP of 750 or more, except when	
required to meet	safety standards. 1 January 2027	
Meeting of	PG-AC	63





Eurovent Proposed amendments of relevance for PG-AC





Agenda



- 1. Introduction, meeting rules
- 2. Attendances
- 3. Approval of the Draft Agenda
- 4. Approval of the Minutes of the last meeting
- Updates on Ecodesign and Energy Labelling
- 6. Compensation Method

- 7. SCIP notification
- 8. F-Gas Regulation

- Coffee break
- 9. What's new in IEC 60335-2-40 last 2022 release?
- 10. Environmental Product Declaration (EPD) and Product Category Rules (PCR)
- 11. Upcoming agenda items
- 12. Announcements, updates on Eurovent activities
- 13. Next meeting(s)



9. What's new in IEC 60335-2-40 last 2022 release? Guest presentation by UL Solutions



 Speaker: Mr. Stefano Traversi, Lead Sales Executive, Appliances and HVACR





Agenda



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 (EPD) and Product Category Rules (PCR)
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Overview of ongoing activities and proposal to set up a relevant Task Force

What is an environmental declaration?

Information on the environmental performance of a product, i.e about the impact and ways of impact the product has on the climate and the environment throughout its life cycle.

Evaluation of environmental performance is based on the Life Cycle Assessment (LCA)
The resulting environmental declaration (most common, EPD) is typically used as input for an LCA

What is LCA?

Life Cycle Assessment is a well-established method for the systematic analysis of the potential environmental impacts of products or services during their entire life cycle.

A general framework for LCA is established in standards ISO 14040 and ISO 14044 which provide a broad scale of applicability but with limited granularity.

on building level.

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10. Environmental Product Declaration (EPD) and Product Category Rules (PCR)



Overview of ongoing activities and proposal to set up a relevant Task Force

What are Product Category Rules (PCRs)?

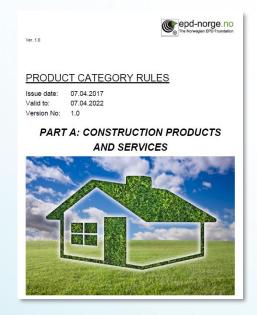
- ISO standards for LCA calculations for EPDs are general.
- Guidance on preparation of EPDs for product group is supplemented in product category rules (PCRs)
- EN 15804 gives a generic PCR for construction products (no use phase & energy consumption).
- The scenario for energy is defined by an EPD programme operator.
- A c-PCR (complementary) may be developed for a specific product group by the EPD programme operator.

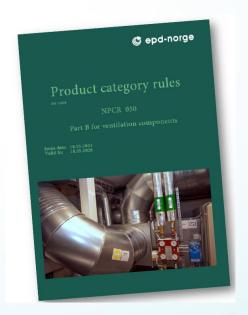




Overview of ongoing activities and proposal to set up a relevant Task Force

Product Category Rules / c-PCR - example



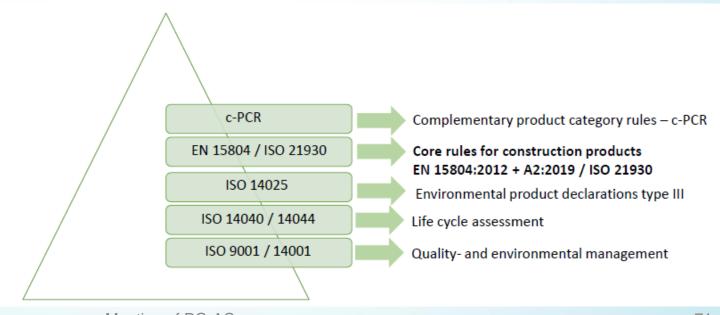






Overview of ongoing activities and proposal to set up a relevant Task Force

Hierarchy of standards for construction products



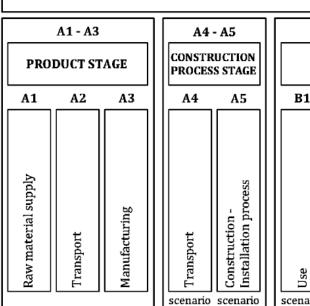


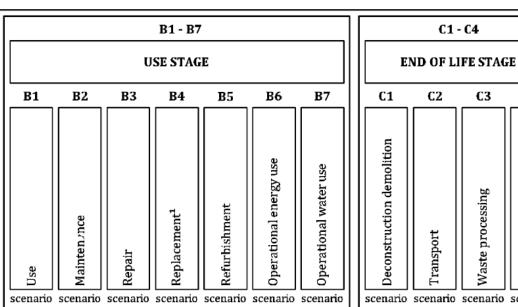
CONSTRUCTION WORKS LIFE CYCLE INFORMATION

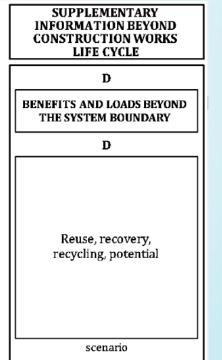


Overview of ongoing activities and proposal to set up a relevant Task Force

Life Cycles for constr uction works (EN 15804)







C4

Disposal

Wednesday, 26 October 2022 Meetin





#BuildingBridge

Overview of ongoing activities and proposal to set up a relevant Task Force

Core enviro nment al impact indicat ors (EN 15804)

Impact category	Indicator	Unit (expressed per functional unit or per declared unit)
Climate change – total ^a	Global Warming Potential total (GWP-total)	${\rm kgCO}_2$ eq.
Climate change - fossil	Global Warming Potential fossil fuels (GWP-fossil)	${\rm kgCO_2}$ eq.
Climate change - biogenic	Global Warming Potential biogenic (GWP-biogenic)	${\rm kg}{\rm CO}_2$ eq.
Climate change - land use and land use change b	Global Warming Potential land use and land use change (GWP-luluc)	kg CO ₂ eq.
Ozone Depletion	Depletion potential of the stratospheric ozone layer (ODP)	kg CFC 11 eq.
Acidification	Acidification potential, Accumulated Exceedance (AP)	mol H+ eq.
Eutrophication aquatic freshwater	Eutrophication potential, fraction of nutrients reaching freshwater end compartment (EP-freshwater)	kg PO $_4$ eq.
Eutrophication aquatic marine	Eutrophication potential, fraction of nutrients reaching marine end compartment (EP-marine)	kg N eq.
Eutrophication terrestrial	Eutrophication potential, Accumulated Exceedance	mol N eq.

Impact category	Indicator	Unit (expressed per functiona unit or per declared unit)	
	(EP-terrestrial)		
Photochemical ozone formation	Formation potential of tropospheric ozone (POCP);	kg NMVOC eq.	
Depletion of abiotic resources - minerals and metals ^c d	Abiotic depletion potential for non- fossil resources (ADP- minerals&metals)	kg Sb eq.	
Depletion of abiotic resources - fossil fuels ^C	Abiotic depletion for fossil resources potential (ADP-fossil)	MJ, net calorific value	
Water use	Water (user) deprivation potential, deprivation-weighted water consumption (WDP)	m^3 world eq. deprived	





Building Bridge

Overview of ongoing activities and proposal to set up a relevant Task Force

A1-A3

Environmental impact category	Unit	AI	AZ	AS	total	A4	Б4	Вб	CI	CZ	CS	C4	U
Global warming potential (GWP) – fossil	kg CO2e	2,30E+02	2,77E+00	3,28E+00	2,36E+02	5,89E-01	1,57E+01	2,04E+02	1,63E-02	3,70E-02	2,02E+01	2,75E-02	-1,21E+02
Global warming potential (GWP) – biogenic	kg CO2e	5,58E+00	-3,24E-03	-8,66E-01	4,71E+00	-6,90E-04	2,11E-01	1,91E-02	1,28E-05	-4,45E- 05	3,17E+00	-7,98E- 04	1,56E+00
Global warming potential (GWP) – luluc	kg CO2e	1,72E-01	2,26E-02	1,67E-02	2,11E-01	4,80E-03	1,01E-02	3,87E-02	1,39E-06	3,06E-04	2,62E-02	8,07E-05	-4,27E-0
Global warming potential (GWP) – total	kg CO2e	2,36E+02	2,79E+00	2,43E+00	2,41E+02	5,93E-01	1,59E+01	2,04E+02	1,63E-02	3,73E-02	2,34E+01	2,67E-02	-1,20E+0
Ozone depletion (ODP)	kg CFC11e	5,56E-06	5,46E-16	3,19E-07	5,88E-06	1,16E-16	1,83E-06	1,41E-13	3,51E-09	7,38E-18	1,12E-11	1,07E-16	-1,68E-0
Acidification (AP)	mol H+e	9,20E-01	1,13E-02	1,92E-02	9,50E-01	2,29E-03	9,09E-02	7,37E-02	1,70E-04	4,17E-04	3,61E-02	1,96E-04	-4,49E-0
Eutrophication (EP) – freshwater	kg PO4e	3,28E-02	8,22E-06	1,41E-03	3,42E-02	1,75E-06	4,78E-03	3,28E-05	4,91E-07	1,11E-07	4,37E-05	4,61E-08	-1,42E-0
Eutrophication (EP) – freshwater	kg Phosphate eq.	1,87E-01	1,89E-03	9,10E-03	1,98E-01	3,84E-04	4,78E-02	7,31E-03	2,89E-05	7,22E-05	4,35E-03	1,76E-05	-3,01E-0
Eutrophication (EP) – marine	kg Ne	1,78E-01	5,33E-03	9,48E-03	1,93E-01	1,08E-03	2,68E-02	2,00E-02	7,53E-05	2,11E-04	1,04E-02	5,08E-05	-7,35E-0
Eutrophication (EP) – terrestrial	mol Ne	1,71E+00	5,92E-02	6,15E-02	1,83E+00	1,20E-02	1,86E-01	2,19E-01	8,24E-04	2,32E-03	1,14E-01	5,58E-04	-7,94E-0
Photochemical ozone formation (POCP)	kg NMVOCe	5,08E-01	1,22E-02	1,43E-02	5,35E-01	2,40E-03	6,40E-02	5,42E-02	2,26E-04	3,87E-04	3,46E-02	1,54E-04	-2,42E-0
Depletion of abiotic resources (ADP) – minerals & metals ¹	kg Sb eq.	3,04E-03	2,45E-07	3,66E-05	3,08E-03	5,21E-08	1,59E-04	2,54E-04	6,57E-09	3,31E-09	4,87E-06	2,59E-09	-1,79E-0
Depletion of abiotic resources (ADP) – fossil fuels ¹	МЈ	3,21E+03	3,69E+01	4,77E+01	3,29E+03	7,83E+00	3,08E+02	2,02E+02	2,22E-01	4,98E-01	2,02E+02	3,64E-01	-1,40E+
Water deprivation potential (WDP) ¹	m3e depr.	1,20E+02	2,57E-02	2,60E+00	1,23E+02	5,45E-03	1,23E+01	3,53E+02	5,34E-04	3,47E-04	1,28E+00	2,95E-03	-5,06E+(

Sample EPD report

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10. Environmental Product Declaration (EPD) and Product Category Rules (PCR)



Overview of ongoing activities and proposal to set up a relevant Task Force

Environmental Product Declaration (EPD)

- EPD, which is an ISO type III Environmental Declaration according to ISO 14025 standard, must be verified by an independent third-party.
- Available environm ental declarations
- Commonly adopted in the building industry (acc. CPR 305/2011 EPDs are voluntary to assess the sustainable use of resources and the environmental impact of construction works).
- EPDs are developed based on ISO 14025 and EN 15804 which provides the core rules for the product category of construction products





Overview of ongoing activities and proposal to set up a relevant Task Force

Types of EPD

- Generic EPDs are based on datasets, not specific to a certain product or project, but representing an average for a product category
 - representative set of suppliers (min. 80%), typically for a specific geographical market – Industry average EPDs
- Product specific EPD containing specific data for a certain product coming from one specific manufacturer
 - covering the environmental footprint from transportation from the supplier to the specific construction site – project specific EPDs

Available environm ental declarations





Overview of ongoing activities and proposal to set up a relevant Task Force

Who can issue an EPD?

- ISO 14025 requires that an EPD must be independently verified.
- In practice data are verified by a third party licensed by an EPD programme operator, and the EPD is registered in the system of the EPD programme operator
- Cost of the EPD development ranges 17.000 to 50.000+ EUR
- Annual fee for registation in EPD libraries: 1.000 3.000 EUR





Overview of ongoing activities and proposal to set up a relevant Task Force

Many EPD programme operators in Europe / other continents

- International EPD System (Sweden) first world's operator
- Association P.E.P (France), French EPD = PEP ecopassport
- Institut Bauen und Umwelt IBU (Germany)
- EPD Norge (Norway)
- KITECH (Korea)

not all of them mutually recognise EPDs nor <u>Product Category</u> Rules (PCRs)



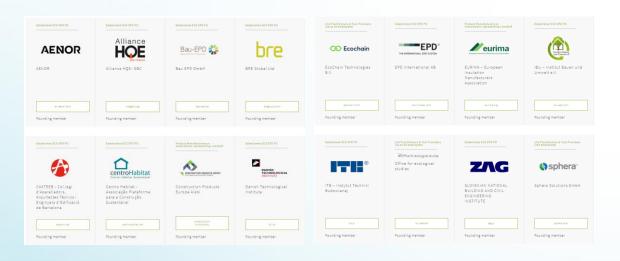


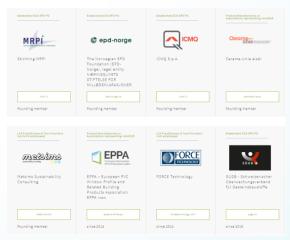
#Building Bridges

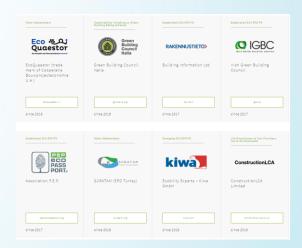
Overview of ongoing activities and proposal to set up a relevant Task Force

eco-platform.org

Umbrella association of EPD programme operators











Overview of ongoing activities and proposal to set up a relevant Task Force

Are EPDs mandatory for Eurovent products?

NOT for the time being, but

- ongoing developments in many Member States related to the integration of LCA calculations in the national Building Codes
 - Several voluntary schemes for assessing the sustainability and environmental performance of buildings

Force HVACR manufacturers to draw up EPDs for their products





Overview of ongoing activities and proposal to set up a relevant Task Force

National Implementations

French RE2020 building regulation

considers the carbon footprint of buildings and requires LCA analisys of materials and equipment (applies as of July 2022)

LCA based on default data, if a supplier has no EPD for its product, or based on EPD if available

Danish building regulation (mandatory in 2023)

limit on CO2 emission of the building live determined based on LCA





Overview of ongoing activities and proposal to set up a relevant Task Force

Regulatory Forecast

Construction Product Regulation (CPR)

The revision of CPR aims to progressively introduce mandatory environmental declarations in the construction product family and to link requirements to the product placing on the market.

Sustainable Products Initiative (SPI) – Ecodesign Requirements for Sustainable Products

The European Commission has worked on the "Sustainable Products Initiative" that is now a proposal for a Regulation, under the name "Proposal for a regulation of the European parliament and of the council establishing a framework for setting ecodesign requirements for sustainable products (ESPR) and repealing Directive 2009/125/EC". The ordinary legislative procedure has officially started, a

The ordinary legislative procedure has officially started, a plenary vote on it could take place around mid-2023.





Overview of ongoing activities and proposal to set up a relevant Task Force

Regulatory Forecast

Product Environmental Footprint (PEF)

- The European Comission has been working on the development of a harmonised methodology for calculation of the Product Environmental Footprint (PEF) since 2012.
- PEFs are in the scope of the Sustainable Product Policy Initiative (SPI) and addressed in the new proposed Ecodesign for Sustainable Products Regulation (ESPR).
- It is expected that with time, PEF and the Digital Product Passport (DPP) will be introduced also in the updated Methodology for Ecodesign of Energy-related Products (MEErP)

Differences between PEF and EPD

The PEF is based on and identical to the Environmental Product Declarations (EPD) initiated and developed by the US Green Building Council (https://www.environdec.com/about-us/global-house-of-epd). The data provided in EPDs are not to compare the environmental performance of respective products. They are used to assess LCA for the entire building, this is why the European Commission has been working on PEF and PEFCR for a decade now on.





Overview of ongoing activities and proposal to set up a relevant Task Force

General Recap

- Lack of PCR harmonisation and EPD recognision
- New national construction regulations addressing the reduction of Whole Life Carbon (WLC) of Buildings
- Indirect forcing HVACR manufacturers to develop EPDs (high cost)
- Expected future mandatory EPDs / PEFs ESPR expected publication in 2023

-> What should / can Eurovent do about this?





Overview of ongoing activities and proposal to set up a relevant Task Force

The Eurovent Commission on 2 September identified PEF/EPD as a priority for the near future And consequently, a dedicated Taskforce will be set up



Before the end of the meeting



- 11. Upcoming agenda items
- 12. Announcements
- 13. Next Meeting

2023 CALENDAR

JANUARY										
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End of meeting

See you soon and enjoy the rest of the **EUROVENT**SUMMIT!





Building Bridges