TU Graz

# Roadmap
# Climate Neutral TU Graz 2030

## First progress report
## submitted to the Rectorate

Final version

Günter Getzinger, last updated on 17.12.2021

# Content

ACTION AREA

# 1. Management of the Climate Neutral TU Graz 2030 Project

## 1.1 Coordination of all action areas and measures, reporting

**Justification of measures**
The approximately 40 measures and bundles of measures that are currently being implemented (in nine measure action areas) require regular implementation monitoring, an impact analysis, the early detection of deviations from the agreed roadmap, any corrective interventions necessary, and the development of supplementary measures. An annual progress report submitted to the Rectorate will serve as a basis for further decisions, also regarding any additional measures.

**Responsible SC working group**
WG Greenhouse Gas Balance

**Responsible for implementation**
Science, Technology and Society Unit

**Description of measures**
The management of the project "Climate Neutral TU Graz 2030" involves

- preparing an annual progress report
- performing the impact analysis of the measures and detecting deviations, as well as developing and implementing the necessary corrective measures
- developing complementary measures
- carrying out the biennial evaluation

**Duration**
From August 2020 and on

**Milestones**
**End of 2024:** Four progress reports will be prepared for submission to the Rectorate; deviations from the roadmap (if present) will be detected and corrected; supplementary measures will be developed together with those responsible for their implementation, and draft resolutions will be prepared.
**End of 2027:** Three further progress reports will be prepared for submission to the Rectorate; deviations from the roadmap (if present) will be identified and corrected; supplementary measures will be developed together with those responsible for their implementation, and draft resolutions will be prepared.
**End of 2030:** Three further progress reports will be prepared for submission to the Rectorate; achievement of goals will be demonstrated, and measures will be implemented to further reduce the GHG emissions to be offset.

**Status of implementation**
Ongoing

## 1.2 External evaluation of the "Climate Neutral TU Graz 2030" project

**Justification of measures**
An external evaluation serves as an independent means of reviewing the goals set with regard to the roadmap and the achievement of these goals. This evaluation should provide valuable information about weaknesses in the implementation process and how these can be addressed.

**Responsible SA working group**
WG Greenhouse Gas Balance

**Responsible for implementation**
Wegener Center for Climate and Global Change at University of Graz

**Description of measures**
The external evaluation should

- Examine and assess the consistency of the overall project
- Examine the effectiveness of the measures adopted
- Determine the effects of the measures taken
- Determine whether the adopted targets are accessible and achievable
- Identify any deviations and weaknesses and provide recommendations for eliminating these

A pilot project carried out between the first and second evaluation serves to develop basic aspects of the measure-impact analysis.

**Duration**
Evaluation performed beginning in autumn 2021 and extending through 2030

**Milestones**
Every September 30th, every two years: submission of an evaluation report

**Status of implementation**
In preparation

ACTION AREA

# 2 Communication and Public Relations

## 2.1 Internal and external communication measures for the Roadmap Climate Neutral TU Graz 2030

**Justification of measures**
The goals and measures of the Roadmap Climate Neutral TU Graz 2030 should be communicated to the TU Graz staff as well as to the interested members of the public. The internal communication measures should arouse the staff's interest in the Roadmap and increase their understanding of it, but it should also increase their willingness to participate. Only by ensuring a high degree of staff (and student) commitment, identification, and participation can the success of the measures be ensured.
External communication measures should serve to present the goals and interim results, and especially to interested members of the public, to young people, and towards other universities and colleges. The starting point for the internal communication was the presentation of the Roadmap by Rector Kainz that took place at the Dialog@TUGraz on 14 October 2020; the starting point for the external communication was a public media presentation of the Roadmap in the presence of Federal Minister Leonore Gewessler and Provincial Councillor Barbara Eibinger-Miedl on 1 March 2021, accompanied by the launch of the website www.klimaneutrale.tugraz.at.

**Responsible SA working group**
WG Greenhouse Gas Balance

**Responsible for implementation**
Communication and marketing

**Description of measures**
Implementation of internal and external communication measures according to the communication plan

**Duration**
From February 2021 and on

**Milestones**
**End of 2024:** The principles of the Roadmap Climate Neutral TU Graz 2030 and its goals will be familiar to the TU Graz staff and to broader, interested members of the public, and its measures will be widely accepted. The achieved interim goals and other relevant contributions will have been communicated.
**End of 2027:** The pioneering role of TU Graz will be recognised by staff, students, and interested members of the public; universities, companies, and other organisations will orient themselves on the basis of the method and measures described in the TU Graz Roadmap.
**End of 2030:** The achievement of the goal "climate neutrality" will be widely communicated, and the results and experiences will made available to interested members of the public.

**Status of implementation**
- Dialog@TUGraz held on 14 October 2020: Roadmap presented to TU Graz staff by Rector Kainz, presentation of the Roadmap available via TU4U.
- Cover and article in *people*, issue 76/20-4
- Press conference with FM Gewessler and PC Eibinger-Miedl on 1 March 2021
- Several contributions via TU Graz internal media channels, at internal and external events, as well as in daily newspapers and magazines
- Website online since March 2021: www.klimaneutrale.tugraz.at, featuring a presentation of the Roadmap Climate Neutral TU Graz 2030 and several branded graphics as well as information about current research projects of TU Graz to reduce GHG emissions.

## 2.2 Staff and student participation

**Justification of measures**
TU Graz staff and students are being encouraged to participate in the further development of the Roadmap Climate Neutral TU Graz 2030 to achieve four goals: (1) the best new ideas will be evaluated, awarded prizes, and implemented to ensure that the goal of climate neutrality is achieved more quickly, effectively, and efficiently; (2) the (also private) commitment of staff and students will be encouraged and rewarded; (3) the Roadmap goals and measures will be communicated in the calls for proposals, leading us to expect their broader acceptance; (4) even more forms of staff and student participation are also being considered, for example, on the topic of climate-friendly lifestyles.

**Responsible SA working group**
WG Greenhouse Gas Balance

**Responsible for implementation**
Science, Technology and Society Unit

**Description of measures**
Collect, evaluate, and award new proposals and activities annually; implement the awarded proposals and ideas from staff (and students) that are not part of the original Roadmap.

**Duration**
From 2022 and on

**Milestones**
**End of 2024:** Proposals and activities from staff (and students) will be initiated, collected, evaluated, and awarded annually, and these will be implemented
**End of 2027:** Proposals and activities from staff (and students) will be initiated, collected, evaluated, and awarded annually, and these will be implemented
**End of 2030:** Proposals and activities from staff (and students) will be initiated, collected, evaluated, and awarded annually, and these will be implemented

**Status of implementation**
Under development

ACTION AREA

# 3 Electricity

## 3.1 100% purchase of green electricity (UZ 46 or equivalent)

**Justification of measures**
Currently, the electricity purchased and consumed by TU Graz causes the largest amount of GHG emissions (as compared to the emissions from heat and mobility). Reducing these emissions by exclusively using electricity from (preferably regional) renewable sources, therefore, is a top priority. One recognised option is to use electricity that has been awarded the Austrian Eco-label 46 (UZ 46). The $CO_2e$ emissions associated with generating one kilowatt hour of electricity can be thereby reduced by about 90 percent as compared to the emissions produced by using conventional, non-UZ 46-certified electricity. As an alternative, TU Graz plans to purchase electricity that can be proven to come from renewable sources (hydropower, wind, sun) and from areas near TU Graz (proof of origin!). Possibilities to participate in regional new, renewable electricity generation projects and to purchase electricity from these plants are also being examined.

**Responsible SA working group**
WG Greenhouse Gas Balance

**Responsible for implementation**
Building and Technical Support

**Description of measures**
UZ46 for the Inffeldgasse, Alte Technik and Neue Technik campuses,
or the purchase of equivalent electricity including a proof of origin, regional, new

**Duration**
From 2021 and on

**Milestones**
**End of 2024**: Electricity procurement for Campus AT and NT will be switched to UZ 46-certified electricity (or equivalent)
**End of 2027**: Electricity procurement will be completely switched to UZ 46-certified electricity (or equivalent)
**End of 2030:** Electricity procurement will be completely switched to UZ 46-certified electricity (or equivalent)

**Status of implementation**
Electricity supply (proof of origin!) from KW Graz-Puntigam for AT; BBG tender (completed in December 2021) for NT (UZ 46) and INF (lot universities, European emissions trading).

## 3.2 PV expansion

**Justification of measures**
Using photovoltaics means generating electricity with less $CO_2e$ emissions. TU Graz, therefore, is trying to maximise the amount of electricity generated by using photovoltaic systems on the roofs of TU Graz buildings in cooperation with the Bundesimmobiliengesellschaft (BIG, joint company). Possibilities to install PV systems on other surfaces is being examined.

**Responsible SA working group**
WG Greenhouse Gas Balance

**Responsible for implementation**
Building and Technical Support

**Description of measures**
Starting from 0.6 MWp and increasing to approx. 2 MWp:
Summer 2022: Increase up to > 1 MWp
Potential 1.7 MWp on all 3 campuses
Another 0.3 MWp for areas “near campus” = total 2 MWp
Lease agreement with BIG, nearly cost-neutral

**Duration**
From 2021 and on

**Milestones**
**End of 2024:** > 1 MWp
**End of 2027:** > 1.5 MWp
**End of 2030:** > 2 MWp

**Status of implementation**
Study carried out jointly with BIG; INF 10, 23, 24, 26; for SAL DH: PV already planned.

ACTION AREA

# 4 Heat

## 4.1 Large heat pump project Inffeldgasse Campus/increase in efficiency

**Justification of measures**
The second most important area in which TU Graz generates $CO_2e$ emissions is that generating space heating; here, this refers primarily to emissions from generating district heating. In the Graz district heating network, this heat is generated primarily by the combustion of natural gas. Although the three companies involved in generating and distributing district heating in Graz are applying a decarbonisation strategy, these processes will continue to be associated with high GHG emissions for the foreseeable future. TU Graz, therefore, has set a personal goal to significantly reduce the consumption specifically related to district heating on the Inffeldgasse campus and the associated $CO_2e$ emissions by improving the control and regulation of this heating, and increasing the use of waste heat, the use of heat storage, and the use of large-scale heat pumps, as well as applying other measures.

**Responsible SA working group**
WG Buildings and WG Greenhouse Gas Balance

**Responsible for implementation**
Building and Technical Support, supported by the Institute of Thermal Engineering as part of the UserGRIDs project.

**Description of measures**
As part of the Innovation District Inffeld project, a sub-project of UserGRIDs (project leader: Thomas Mach, IWT; TU Graz participants: GuT, IBPSC, IST, IRT, STS), the feasibility of using a large-scale heat pump to supplement the district heating supply is being examined. This involves the evaluation of potential to increase efficiency by networking the individual buildings into an energy network (with special consideration of the large consumers), as well as by integrating energy storage systems. The goal would be to install a large-scale heat pump and – if the evaluation yields a positive result – to establish an energy network using long-term storage, which would allow cost-neutral operation as compared to the district heating option. Efficiency could additionally be increased using artificial intelligence, etc.

**Duration**
From 2021 and on

**Milestones**
**End of 2024**: An IoT platform for the Innovation District Inffeld will be implemented.
All data relevant to the energy operation of the Innovation District Inffeld will be collected on this platform, be stored, partly checked for errors using machine learning models, merged into energy balances, and visualised via a dashboard for specific target groups.
An energy concept for the Innovation District Inffeld 2030 has been completed.
This is based on an energy simulation model (created in 2020) validated by using measured values, which depicts all relevant components and their interactions transiently and is operated based on a cross-campus control concept.
**2026:** Planning of the configuration evaluated as reasonable will be completed.
**2028:** Implementation of the configuration that is evaluated as reasonable will be completed.

**Status of implementation**
The UserGRIDs research project is being funded by the Vorzeigeregion/Green Energy Lab research funding programme; work began in March 2021.

ACTION AREA

# 5 Mobility

## 5.1.1 Mobility concept for commuters: E-mobility – expanding the charging infrastructure

**Justification of measures**
In order to reduce the $CO_2e$ emissions produced by commuters, the use of electrically powered vehicles should be promoted for those staff members who absolutely must rely on private cars for their commute to work. By 2030, the aim is to achieve a 50% share of electric mobility among staff (currently commuting by private car). Offering an electric charging infrastructure (with low-cost charging) plays a central role, as it makes the use of electric vehicles more attractive. The extent of this infrastructure, therefore, will be expanded on the TU Graz campus by gradually equipping existing parking spaces with charging infrastructure.
In addition, five e-cars for carsharing are currently available to staff (e.g. for business trips and travel).

**Responsible SA working group**
WG Mobility

**Responsible for implementation**
Building and Technical Support

**Description of measures**
Target: 50% e-mobility among commuters by 2030; approx. 60 charging points by 2024; 200 charging points by 2030; cost allocation to staff (always cheaper than household electricity), cost-neutral for TU Graz.

**Duration**
From 2021 and on

**Milestones**
**End of 2024:** At least 38 new charging points will be installed at TU Graz, offering an attractive service for employees who commute to work from outside Graz, enabling them to charge their cars on-site. This will initially create more supply than demand in order to create incentives for the switch.
**End of 2027:** Further charging points will be added accordingly and will be largely utilised.
**End of 2030:** The increasing demand for charging infrastructure can no longer be met by the additional car parking spaces equipped with charging points alone. 50% of the commuting staff members' cars can be charged on-site at 200 charging points. This infrastructure complements the privately retrofitted infrastructure offered at the residential location, and continues to encourage the switch to (e-)cycling and public transport.

**Status of implementation**
Currently, 22 charging points are available; research into funding possibilities, municipal loan is ongoing; funding application has been prepared with GEA/HERRY, submission for funding made on 26.02.2021; market investigation carried out by Schrack and Energie Steiermark; concept: 16 sub-distributors with a total of 200 charging points (3.7-11 kW) by 2030; start with 8 sub-distributors with approx. 50 charging points in all incl. load flow management by the end of 2023, detailed planning and phased concept started; survey on e-mobility among parking permit holders conducted in autumn 2021.

## 5.2 Mobility concept for commuters: Parking space management – extending the "sphere of limitation" to 3 km

**Justification of measures**
Out of the total of 820 people who have access authorisation to the TU Graz premises, 140 live within a 3-km radius from their workplace. TU Graz has a total of 660 parking spaces. The central location of the TU Graz locations and their optimal accessibility by public transport, as well as by (e-)bicycle and on foot, make it possible for these people to commute easily to work even without using a private car. Therefore, no more car parking spaces should be available to these people on the TU Graz premises (exceptions only for social reasons).
In addition to incentives offered that encourage people to switch to using climate-friendly mobility solutions, the existing parking spaces can be made available for the increasing number of employees (due to the growth of TU Graz) who have to travel from further away and who cannot be reasonably expected to commute by public transport or (e-)bicycle.

**Responsible SA working group**
WG Mobility

**Responsible for implementation**
Building and Technical Support

**Description of measures**
No entry authorisation for staff living within a 3-km radius of their campus; exceptions only for social reasons

**Duration**
From 2022 and on

**Milestones**
**End of 2021:** The TU Graz staff will be informed of the plans to increase the "sphere of limitation" for parking permits on TU Graz premises to 3 km around the workplace and given the opportunity to make arrangements to change their mobility behaviour.
**1.1.2022:** The "sphere of limitation" for parking permits on the TU Graz premises will be expanded to 3 km around the workplace. Any exemptions will be granted.

**Status of implementation**
Amendment of the directive in preparation, information provided in spring 2021, started on 1.1.2022

## 5.3 Mobility concept for commuters: Parking space management – placing a $CO_2$ fee for fossil-fuelled (and later also hybrid) cars

**Justification of measures**
Parking management is an efficient way to compensate for the use of valuable open spaces for parking private vehicles. So far, the fees for parking vehicles on the TU Graz premises have been low compared to the market prices for private parking spaces and garages. Adjusting these fees can encourage people to switch to more climate-friendly means of transport; therefore, a $CO_2$ fee will be added to the parking fees for fossil-fuelled cars. These funds will be dedicated for TU Graz support of more sustainable mobility offers.
For those who depend on private cars for commuting, the use of electrically powered vehicles will be made more attractive. These vehicles have a more favourable climate balance due to their significantly lower emissions of $CO_2$e as compared to fossil-fuelled vehicles. In order to promote the switch to electrically powered passenger cars, these will be exempt from the dedicated $CO_2$ fee. Until the end of 2027, hybrid passenger cars will also be exempt from the $CO_2$ fee.

**Responsible SA working group**
WG Mobility

**Responsible for implementation**
Building and Technical Support

**Description of measures**
Assigning a parking fee for fossil-fuelled cars from 2022 to 2024 of €6 or €12 (underground car park), dedicated for promotional measures related to e-charging infrastructure, cycling, and public transport. The $CO_2$ fee will increase as follows:
2025 and 2026: €11 and €22, respectively
2027 and 2028: €16 and €32, respectively (also applies to hybrid-powered passenger cars from 1.1.2028 and on)
2029 and 2030: €21 and €42, respectively.

**Duration**
From 2022 and on

**Milestones**
**Beginning in 2022**: The parking fees at TU Graz will be increased by €6 and €12 for fossil-fuelled cars.
**Beginning in 2025**: Further increase in parking fees is planned.
**Beginning in 2027**: Further increase in parking fees is planned. (Increased parking fee also applies to hybrid-powered cars from 1.1.2028 and on.)
**Beginning in 2029:** Further increase in parking fees is planned.
Due to the increasing electrification of the staff car fleet, the revenue from the $CO_2$ fees will gradually decrease.

**Status of implementation**
Amendment of the directive in preparation, information in spring 2021, will begin on 1.1.2022

## 5.4 Mobility concept for commuters: Promoting TU Graz bicycles

**Justification of measures**
For many years, the increased use of active forms of mobility has been shown to contribute to climate protection, as have the positive effects of this use on urban space and human health. With its largely flat terrain, the city of Graz is ideally suited for cycling.
By providing support offers that encourage staff to purchase bicycles, TU Graz already makes a significant contribution to cycling in Graz. The continuation of this campaign for new TU Graz staff members (if they have sufficient interest and fulfil specific criteria) is indispensable. Because a bulk order is made, it is possible to offer a significantly better price/performance ratio.
In addition, accompanying service offers (service days, self-service stations, and showers on site, bicycle safety training) are essential for promoting cycling, whereby each has its own sphere of influence, and complement the development of the corresponding infrastructure, which is being pushed by the public sector.

**Responsible SA working group**
WG Mobility

**Responsible for implementation**
Building and Technical Support

**Description of measures**
Subsidised bicycles for TU Graz staff (and students); subsidy of approx. €350/bike for staff who have work contracts for more than or equal to 10 hours/week and who do not have a parking permit.
Regularly offered free bicycle service, provision of showers; provision of self-service stations, regularly offered bicycle safety training.
The criteria that need to be met to receive support can be expanded or focused on corresponding user groups and, if necessary, the funding can be increased. For example, additional funding could be provided for bicycles for students.

**Duration**
Ongoing

**Milestones**
**End of 2024:** More than 2,000 TU Graz-branded bicycles will be use.
**End of 2027:** Continuation of the support actions for staff and students
**End of 2030:** More than 3,000 TU Graz-branded bicycles will be in use. Parts from the first generation of bicycles will be exchanged after some years of use, if interest exists and appropriate criteria are met.

**Status of implementation**
Ongoing; by end of 2020: 1,710 TU Graz branded bicycles; all previously mentioned support offers secured

## 5.5 Mobility concept for commuters: Promoting e-bikes

**Justification of measures**
Overall, 680 TU Graz staff members currently live more than 3 km away from their workplace and use a private car for their daily commute to TU Graz. Especially when the commute to work has to be combined with other commuting purposes, such as picking up and dropping off children or doing daily errands, the advantages of using a private car often outweigh the disadvantages. This is despite the fact that more and more employees are also recognising the advantages of cargo bikes; the TU Graz Student Union currently provides cargo bikes free of charge.
Pedal-assisted e-bikes make longer rides more comfortable and provide commuters with a wider radius of accessibility (i.e. about 6 km can be easily covered in only 20 minutes of riding time).
Extending the support offer for purchasing bicycles to e-bikes for staff who commute, as well as to cargo bikes, thus helps to minimise the use of cars.

**Responsible SA working group**
WG Mobility

**Responsible for implementation**
Building and Technical Support

**Description of measures**
Subsidised (e-)bicycles for TU Graz; subsidy of €150/e-bike, capped at €20,000 per year.

**Duration**
From 1.1.2022 and on

**Milestones**
**End of 2024**: The purchase of a significant number of e-bikes will be promoted due to support from TU Graz. The effect of the increased number of people commuting by bicycle will be reflected in the emissions balance for commuting staff as well as in the TU Graz modal split statistics.
**End of 2027:** The increasing demand (due to the growth of TU Graz and the resulting increase in the number of staff) will be met by the subsidy for purchasing additional e-bikes.
**End of 2030:** TU Graz staff will be encouraged to purchase a considerable number of e-bikes through a promotion campaign. Most TU Graz staff who live within a radius of 6-12 km from their workplace will commute regularly by (e-)bike.

**Status of implementation**
Concept for the awarding guidelines will be available from September 2021 and on

## 5.6 Mobility concept for commuters: Constructing covered bicycle parking spaces

**Justification of measures**
Weather-protected, illuminated, secure, and directly accessible bicycle parking spaces, which are distributed throughout the campus according to where they are most needed, offer cyclists a convenient service even at off-peak times and under difficult weather conditions, increasing the year-round usability of bicycles.
According to the City of Graz planning recommendations, at least 740 bicycle parking spaces should be available for the currently around 3,700 TU Graz staff members and more than 1,700 bicycle parking spaces for the around 13,500 students. These recommendations are based on the normal distribution for the use of means of transport. Due to the above-average proportion of cyclists among staff and students at TU Graz, additional bicycle parking spaces need to be created to ensure that all bicycles can park properly.

**Responsible SA working group**
WG Mobility

**Responsible for implementation**
Building and Technical Support

**Description of measures**
Construction of approx. 100 covered bicycle parking spaces per year (subsidised), in accordance with the implementation plan, partly equipped with a machine for purchasing inner tubes and a service station.

**Duration**
Ongoing

**Milestones**
**End of 2024:** More than 1,500 covered bicycle parking facilities will be available for staff and students. This means that about 60% of the recommended bicycle parking spaces will be covered and well-equipped.
**End of 2027**: The use of bicycles will be increasingly common, even in bad weather (and especially rain).
**End of 2030:** A total of more than 2,100 covered bicycle parking spaces will be available for TU Graz staff and students.

**Status of implementation**
Ongoing; September 2020: 1,280 covered parking spaces exist and another 100 next to INF10 are being created.

## 5.7 Mobility concept for commuters: Expanding the cycling network between the campuses, traffic calming on campus

**Justification of measures**
In addition to promoting the purchase of TU Graz-branded bicycles and e-bikes and increasing the number of covered bicycle parking spaces, the potential for increasing the use of bicycles on the way to work or to study is also decisively influenced by the expansion of the network of bicycle paths. TU Graz is applying its expertise and expressing its commitment by creating an efficient network of bicycle paths and an attractive and pedestrian-friendly campus environment. On the one hand, developing more connections between the campus areas enables staff and students to move quickly, safely, and in a climate-friendly manner between teaching and research locations. On the other hand, the (pedestrian) accessibility of TU Graz will be ensured for staff and students who live near their workplace and, therefore, are not entitled to parking permits or public transport ticket subsidies. Creating wide footpaths, more green space, recreational zones, and reducing motorised individual traffic near the campuses promote walking and increase the "walkability" of the area, the quality of time people spend there, and the sense of safety they have.

**Responsible SA working group**
WG Mobility

**Responsible for implementation**
Building and Technical Support

**Description of measures**
Construction of high-level cycle paths between the TU Graz campuses (priority: high-level cycling path between the Inffeldgasse campus and Graz Opera) and from TU Graz campuses to other Graz universities and colleges; campus traffic calming (priority areas: Stremayrgasse, Kopernikusgasse in front of NT, Inffeldgasse, Technikerstraße, Rechbauerstraße, Lessingstraße).

**Duration**
From 2020 and on

**Milestones**
**End of 2024:** The high-level cycling path between the Inffeldgasse and Steyrergasse campuses will be completed. A concept for further redesigning the streets in and around all TU Graz campus areas has been adopted by the City of Graz. Stremayrgasse and Kopernikusgasse (in front of NT) have been traffic-calmed (FuZo, meeting zone, or residential street).
**End of 2027:** The high-level cycle path between Steyrergasse and Graz Opera House will be completed. Safe, attractive, and direct cycling and walking networks between the university campuses in Graz will largely be established. The Alte Technik and Neue Technik campus areas will be more strongly connected with their urban surroundings; in particular, Rechbauerstraße and Technikerstraße will be traffic-calmed (FuZo, meeting zone, or residential street).
**End of 2030:** The measures of the cycling offensive established by the City of Graz and the Styrian Province will be completed; efficient cycling networks will exist between all university campuses in Graz. All campus areas will be traffic-calmed, made more attractive, and integrated into a lively urban environment.

**Status of implementation**
Ongoing discussions with all stakeholders, and in particular with the City of Graz Department of Transport Planning; planning for cycling network connecting INF-NT-AT-Opera is well underway: high probability of implementation; discussions and planning as part of the WG Mobility at the Styrian University Conference, coordinated by Med Uni Graz; Master's thesis (Institute for Urbanism) on traffic calming on campus.

## 5.8 Mobility concept for commuters, business trips: Promoting public transport use

**Justification of measures**
In addition to cycling and walking, public transport is the most attractive alternative to using a private car for the daily commute. Around 500-600 TU Graz staff members already take advantage of the possibility to receive the discounts for annual or semi-annual Graz public transport tickets that are offered by TU Graz (and do without a parking space at TU Graz). In the near future, a low-priced annual ticket for public transport throughout Styria will be offered ("Klimaticket Steiermark" [Styrian Climate Ticket]), for which TU Graz will also offer a discount. This ticket will also offer commuters who have to cover longer distances a cheap alternative to using a car.
The 680 employees of TU Graz who still commute to work by car are offered a further incentive to switch to public transport through this attractive subsidy offer or mixed variants thereof (e.g. combination of public transport and bicycle subsidy).
For commuters from neighbouring federal provinces, the "2-Bundesländer-Ticket" [2-Province Ticket] (valid for every journey in two selected federal provinces) will be promoted as soon as it is introduced. In addition, the "Klimaticket Österreich" [Austrian Climate Ticket] will also be promoted, for example, for commuters from Vienna or for staff who frequently travel by train and bus in Austria for other reasons (e.g. business trips).

**Responsible SA working group**
WG Mobility

**Responsible for implementation**
Building and Technical Support, Human Resources

**Description of measures**
Cost subsidy for half-year or annual ticket in the core Graz 101 zone (personalised/non-personalised) remains valid; cost subsidy for the Styrian Climate Ticket; cost subsidy for the Austrian Climate Ticket.

**Duration**
Network ticket for the core 101 zone in Graz: ongoing; Styrian Climate Ticket and Austrian Climate Ticket: from 1.1.2022 and on; 2-Province Ticket (when it is introduced).

**Milestones**
**End of 2024:** The Climate Ticket will be fully introduced in Austria; it will be promoted at TU Graz. The promotion of the annual and semi-annual tickets for the core 101 zone in Graz will be maintained.
**End of 2027**: 85% of TU Graz staff will commute to work either by foot, (e-)bicycle, or public transport (as their main mode of transport) (2017: 79%)
**End of 2030:** 90% of TU Graz staff will commute to work either by foot, (e-)bicycle, or public transport (as their main mode of transport).

**Status of implementation**
Promotion of the annual or semi-annual tickets for the core 101 zone in Graz will be continued (2020: 530 tickets promoted); supplemented by promoting the Styrian Climate Ticket and the Austrian Climate Ticket from 1.1.2022 and on in preparation; promotion of the 2-Province Ticket will begin once it has been introduced.

## 5.9 Business trips and stays abroad: Target – reducing GHG emissions from air travel by 50%, monitoring with a GHG balance

**Justification of measures**
In the area of mobility, air travel (business trips and stays abroad) causes the largest share of greenhouse gas emissions by far. In total, around 5,082 t $CO_2$e, i.e. 23.3% of all greenhouse gas emissions from TU Graz, are caused by business trips (2017 GHG balance). 1,129 t $CO_2$e are produced by stays abroad by staff and students. It is absolutely necessary to reduce the emissions caused by business trips and stays abroad to achieve the climate goals.
In addition to avoiding taking business trips that are not absolutely necessary (e.g. those that can easily be replaced by video conferencing), the main aim is to encourage staff to use rail and bus connections rather than plane connections for this travel. GHG balance will be calculated at regular intervals will serve as a tool to monitor this process.

**Responsible SA working group**
WG Mobility

**Responsible for implementation**
Science, Technology and Society Unit

**Description of measures**
Reduction in GHG emissions from air travel from 6,211 t $CO_2$e (according to the 2017 GHG balance) to 3,106 t $CO_2$e by 2030 (based on the 2017 emission factors); monitoring as part of calculating the GHG balance for TU Graz

**Duration**
From 2020 and on

**Milestones**
**End of 2024:** a total of three GHG balances for TU Graz are available: 2017, 2020, and 2023. 2023: GHG emissions from air travel will be reduced by 20 percent. If this target is not achieved, further measures will be defined and budgeted.
**End of 2027:** Another GHG balance will be available (balance for 2026): GHG emissions from air travel will be reduced by 40 percent. If this target is not achieved, further measures will be defined and budgeted.
**End of 2030:** Another GHG balance will be available (balance 2029): GHG emissions from air travel will be reduced by 50 percent.

**Status of implementation**
Emissions in 2017: 6,211 t $CO_2$e; the survey of GHG emissions from air travel 2020 as part of calculating the GHG balance for TU Graz in 2020 was initiated in May 2021; the balance was obtained by November 2021.

## 5.10 Business trips and commuter mobility: Expanding the teleconferencing infrastructure

**Justification of measures**
Video conferencing systems make it possible for people to hold many work meetings easily and quickly online, without needing to be in the same room with the participants. If the technically flawless operation of these systems can be guaranteed, the use of different video conferencing infrastructures can contribute to reducing the number of business trips that are necessary, but also reduce the need for staff to commute. This reduction can occur, for example, by implementing the company agreements (which will come into force in 2021) regarding how work is performed in home office or by encouraging online teaching events. Meetings and workshops with local, national and international colleagues and partners, appointment committees, job interviews, and much more can take place online, saving money, time, and, above all, helping to protect the climate.

**Responsible SA working group**
WG Mobility

**Responsible for implementation**
IT Services, Building and Technical Support

**Description of measures**
Expansion of the teleconferencing infrastructure, including ongoing maintenance. This comprises: equipment for individual workstations (e.g. headsets and cameras), individual systems for meeting rooms; systems with individual workstation equipment for rooms, systems "suitable for appointment committees" (i.e. that are analogous to university management meeting rooms). Budgeting performed by IT Services.

**Duration**
From 2020 and on

**Milestones**
**End of 2024**: Several international events held at or by TU Graz have already been held completely or partially online. The company agreements that came into force in 2021 to regulate how work should be performed in home office continue to be successfully implemented at TU Graz.
In addition to ongoing maintenance, 1-2 additional rooms per year will continue to be equipped with teleconferencing infrastructure. Communication data to and from other countries show that these systems are being intensively used.
**End of 2027:** Communication data to and from other countries will indicate that the use remains at a high level and that the number of international digital "visits" will have increased.
**End of 2030:** Digital capabilities will have further expanded, technical innovations will be integrated into hardware and software, and staff and teachers will be familiar with how to use these. The amount of communication data to and from other countries will reach a new high (as compared to the period after the 2020-22 pandemic).

**Status of implementation**
Approx. 50 rooms are currently set up for teleconferencing; company agreement for work in home office is in force.

## 5.11 Business trips: $CO_2e$ monitoring tool

**Justification of measures**
There are different methods for saving $CO_2e$ emissions associated with different types of business trips (short-, medium-, and long-distance, for research purposes, to attend conferences, workshops, to visit cooperating institutions, in combination with private stays, etc.).
This heterogeneity makes it difficult to measure and gain an overview of personal and collective GHG emissions. By using a system that can accurately record and analyse the travel chains, distances, and means of transport for all business trips, it is possible for staff and organisational units to visualise the GHG emissions from business trips. This information gained from this visualisation allows specific measures to be developed that will make business trips taken by TU Graz staff even more climate-friendly.

**Responsible SA working group**
WG Mobility

**Responsible for implementation**
Change Management and Implementation

**Description of measures**
Implementation of a GHG monitoring tool in the business trip accounting system which enables the precise collection of data on GHG emissions from business trips (for use in the TU Graz GHG balance, by the business traveller, and by the OU).

**Duration**
From 2022 and on

**Milestones**
**Beginning in 2022:** The technical implementation of the monitoring tool will be completed.
The tool that can be used to record GHG emissions during business trips will be applied.
**End of 2024:** All business trips will be fully recorded in the system, and further specific measures will be developed to reduce emissions from business trips in a targeted manner. GHG emissions from business trips by plane will be reduced by 20% (baseline data: 2017 GHG balance).
**End of 2027:** The results of applying the monitoring tool will show that a shift to more sustainable modes of business travel has occurred; GHG emissions from business travel by air will be reduced by 40%.
**End of 2030:** The results of applying the monitoring tool will show that GHG emissions from business trips by plane have been reduced by 50% (baseline data and emission factors: 2017 GHG balance).

**Status of implementation**
Development of the tool is underway, use tested in autumn 2021, tool applied as of 1.1.2022.

## 5.12 Business trips: Measures accompanying the "Stay Grounded, but Keep Connected" campaign

**Justification of measures**
In order to encourage TU Graz staff to avoid flying over short and medium distances (business trips and stays abroad) and to switch to using train connections instead, a variety of measures to communicate information and raise awareness have been planned. The advantages of rail travel and the importance of the GHG monitoring tool (which visualised the effects of applying these measures) will be communicated in this way.
These measures include: Videos featuring testimonials/role models, cooperation with the ÖBB, advertising the project and the GHG monitoring tool in various meetings (e.g. boards of trustees, faculty meetings), involving staff in the pilot operation of the GHG monitoring tool, communicating with the TU Graz community via various channels (e.g. people, insiders), holding ‘Railway Days’ in the Nanoversity, creating special merchandise items, and holding competitions.

**Responsible SA working group**
WG Greenhouse Gas Balance

**Responsible for implementation**
Change Management and Implementation

**Description of measures**
Implementation of accompanying measures related to business trips based on the developed concept

**Duration**
2021 to 2023

**Milestones**
**End of 2023:** All accompanying measures will have been applied and will have been well-received.

**Status of implementation**
First video on business trips by train is being produced; the ‘Railway Days’ in the Nanoversity have been planned; cooperation with the Institute of Railway Engineering and Transport Economy has begun; cooperation agreement with ÖBB has been signed; competitions are being planned; TU4U page on "Sustainable Business Travel" has been designed.

## 5.13 Stays abroad by staff and students: THG monitoring

**Justification of measures**
According to the TU Graz GHG balance, trips abroad by staff and students account for around 1,326 t $CO_2$e (as of 2017). It will only be possible to evaluate the potential for reducing GHG emissions if these trips can be carefully documented and the GHG emissions produced by them can be calculated. Precise monitoring is also a prerequisite for developing GHG emission reduction measures (e.g. encouraging people to switch from air to rail transport, complemented by the efforts of the funding bodies).

**Responsible SA working group**
WG Mobility

**Responsible for implementation**
International Office - Welcome Center

**Description of measures**
A survey will be carried out to collect information about the means of transport used and the number of kilometres travelled for the journey to and from the destination cities; Green Travel funding will be applied as part of the Erasmus+ programme (€50 subsidy for using a train, bus, or carpool).

**Duration**
From 2021 and on

**Milestones**
**End of 2022:** The GHG emissions for all stays abroad will be collected as part of the GHG monitoring and can be visualised; measures will be developed.

**Status of implementation**
The regular survey regarding the journey to and return from the destination city or cities for the stays abroad will be carried out by integrating this into the feedback questionnaire sent to staff and students after their stay abroad from mid-2021 and on. This will enable the GHG emissions produced by stays abroad to be determined. Applications for Green Travel funding are being accepted as part of the Erasmus+ programme by the TU Graz International Office - Welcome Center.

## 5.14 Business trips: Preference for using trains over cars and planes in the Business Travel Policy

**Justification of measures**
When planning business trips, comfort, time, and costs are usually factors that influence the choice of the form of transport. In order to encourage people to use forms of mobility with lower emissions, the preference for these forms over other forms of mobility that produce more emissions has been anchored in the TU Graz Business Travel Policy.
Specifically, the current version of the Business Travel Policy (March 2021) stipulates that, in addition to the most cost-effective option, the most ecologically sound option for business travel should be preferably chosen and – within Europe – train travel should be preferred over travel by plane or by private car. The (desirable) possibility of combining a business trip with a private stay (holiday) is also described and regulated in detail. Exactly how the costs for the ÖBB Vorteilscard are reimbursed by TU Graz is also regulated.

**Responsible SA working group**
WG Mobility

**Responsible for implementation**
Human Resources

**Description of measures**
The use of trains for business trips within Europe is clearly preferred over the use of cars and planes; rail tickets may – for ecological reasons – also be more expensive than plane tickets; how the costs of the Vorteilscard (50% cost savings) are reimbursed is clearly regulated; how business trips can be combined with a personal holiday is also clearly regulated.

**Duration**
From 2021 and on

**Milestones**
**March 2021**: Measure implemented.

**Status of implementation**
Implemented in the TU Graz Business Travel Policy, which has been in force since March 2021.

## 5.15 Business travel: Placing a climate protection fee on air travel

**Justification of measures**
Many air journeys within Europe have the potential to be replaced by climate-friendly rail and bus journeys. Especially for short-haul flights, there is generally not a big difference in terms of cost or time. Medium-haul flights, however, are often offered at significantly lower prices than rail and bus travel. This cost factor in particular, therefore, has recently promoted emission-intensive air travel. To compensate for this, a TU Graz-internal climate protection fee is being added to air travel. This earmarked contribution is then used to finance measures that promote the use of public transport.

**Responsible SA working group**
WG Mobility

**Responsible for implementation**
Human Resources, Change Management and Implementation

**Description of measures**
Placing a climate protection fee on air travel: €100,- for air travel within Europe, €200,- for air travel outside of Europe; this fee will be paid out of OU funds

**Duration**
From 1.1.2022 and on

**Milestones**
**From 1.1.2022:** Climate protection fee related to air travel is introduced and anchored in the Business Travel Policy and in SAP Fiori.
**End of 2024:** The climate protection fee for air travel will finance measures to make rail travel more attractive for business travel; air and rail travel will become more equivalent in terms of costs; efforts to reduce GHG emissions related to air travel by TU Graz staff by 50% (target) by 2030 will be supported.

**Status of implementation**
In preparation; will be anchored in the TU Graz Business Travel Policy and in SAP Fiori as of 1.1.2022.

## 5.16 Business trips: Covering the costs of 1st class train and bus trips and night train trips

**Justification of measures**
The revenue from the climate protection fee for air travel (see Measure 5.15) will be used for an incentive system to increase the use of rail and bus. In particular, increasing the comfort by allowing 1st class travel and the use of a sleeper car makes long train and bus journeys more attractive for the traveller, as the travel time can be used as working time, for recreation, or as a way to use the night hours productively.

**Responsible SA working group**
WG Mobility

**Responsible for implementation**
Human Resources, Change Management and Implementation

**Description of measures**
Costs for 1st class train and bus tickets can be covered by the Rectorate for travel lasting 3 or more hours, as can the costs for tickets on night trains (sleeper car, single compartment).

**Duration**
From 1.1.2022 and on

**Milestones**
**As of 1.1.2022:** The measures have been introduced and anchored in the Business Travel Policy and in SAP Fiori.
**End of 2024:** The supporting measures make longer bus and train journeys and journeys by night train more attractive; efforts to reduce GHG emissions related to air travel by TU Graz staff by 50% (target) by 2030 will be supported.

**Status of implementation**
In preparation; will be anchored in the TU Graz Business Travel Policy and in SAP Fiori as of 1.1.2022.

ACTION AREA

# 6 Buildings

## 6.1 Measures to reduce GHG emissions associated with new buildings

**Justification of measures**
TU Graz will continue to grow significantly over the next ten years. In order to minimise the associated additional GHG emissions – including those associated with operating these buildings in the future, producing the building materials and components used to construct the buildings, and the method of construction used ("grey emissions") – specific bundles of measures will be defined for each new building to be constructed, which will minimise the emissions in these areas. These bundles of measures will be applied in the very early phases of building planning and project development.

**Responsible SA working group**
WG Buildings

**Responsible for implementation**
Building and Technical Support

**Description of measures**
Specifications for building materials, elements, and construction methods with regard to the new buildings to be constructed at TU Graz that lead to significantly reduced $CO_2e$ emissions; further reduction in specific GHG emissions in the operation of buildings.

**Duration**
From 2021 and on

**Milestones**
**Mid-2022:** Conduct tender-based LCA analyses based on the EBS, SAL, and DH buildings.
**Mid-2023**: Simulation of a new building will be performed (e.g. based on EBS) to completely and "internally" compensate for the "grey" GHG emissions. The following bundles of measures will be considered:

- Reduction of material use in building elements with a high "grey" GHG emissions, e.g. hollow core slab ceilings when concrete is used
- Use of $CO_2e$-reduced building materials, e.g. "ECO² concrete"
- Use of "compensatory" carbon-storing building materials that store $CO_2e$ extracted from the atmosphere for the life of the building, e.g. wood.
- Minimising the replacement intervals for building fixtures

**From 2024 and on:** Implementation of the simulation results in a new construction project

**Status of implementation**
Established measures: Heat pump, external shading, heating/cooling by activating building elements, use of roof surfaces for PV, greening, water retention, controlled room ventilation, toilet flushing with greywater, meter and energy management. Being implemented: accompanying LCA → implementation of a bundle of measures for all buildings constructed in the future, including the reduced use of concrete and solid reinforcements, increased use of wood and lightweight walls (hybrid construction with mixture of materials).

## 6.2 Measures to reduce GHG emissions associated with the operation of existing buildings

**Justification of measures**
The buildings used by TU Graz have very different structural features. New technologies now enable structural (and especially thermal) renovations that were not feasible just a few years ago. Regularly inspecting the TU Graz buildings to examine the need and potential for renovation, and then planning and carrying out renovation based on the results of this inspection, will enable TU Graz to minimise its heating, ventilation, and cooling needs and to reduce the associated GHG emissions. The GHG emissions associated with maintenance and installation are also taken into account.

**Responsible SA working group**
WG Buildings

**Responsible for implementation**
Building and Technical Support

**Description of measures**
Regular inspections, to be carried out every three years, to determine the structural condition of the buildings used by TU Graz and to identify (new) ways to increase energy efficiency and use renewable energy sources.

**Duration**
From 2021 and on

**Milestones**
**End of 2021:** Standardised inspection of TU Graz buildings together with BIG. The measures that have already been applied and those that are potentially still being developed in the following categories are presented below:

- Building envelope
- Heating/cooling supply
- Heating/cooling distribution
- Facilities for releasing energy (heating) and absorbing energy (cooling)
- Ventilation
- Heat recovery
- PV on the roof and façade
- Optimisation of the BMS, e.g. recommissioning
- Overheating in summer
- Robustness against extreme weather situations

Updating the inspection results every 3 years (performance period)

**Status of implementation**
In development; no budget, because included as part of the ongoing maintenance measures.

ACTION AREA

# 7 Materials and equipment

## 7.1 Specifying and implementing a minimum useful lifetime of six years for IT equipment

**Justification of measures**
IT devices are already highly energy-efficient when used. Therefore, efforts must be directed towards reducing "grey energy", i.e. the energy that is used to produce (and dispose of) the devices. TU Graz is contributing to these efforts by working to extend the minimum useful lifetime of the equipment. This will reduce the share of GHG emissions that can be attributed to TU Graz in the medium term. In order to achieve this goal, the warranty contracts, repair options, and possibilities to upgrade the equipment will be examined and altered if necessary. The staff members should be informed regarding this goal and the resulting measures.

**Responsible SA working group**
WG GHG balance

**Responsible for implementation**
IT Services

**Description of measures**
Specification and implementation of a minimum useful lifetime of six years for IT equipment

**Duration**
From 2022 and on

**Milestones**
**End of 2024:** IT equipment will be used for at least six years. Staff members are only entitled to a new PC/notebook after a 6-year period has elapsed.

**Status of implementation**
Analysis of data on the current useful lifetime, examination of the requirements in order to implement a minimum useful lifetime of six years (guarantees, upgrades, repairs, etc.).

ACTION AREA

# 8 Canteen and Food

## 8.1 Measures to reduce GHG emissions related to the meals offered at TU Graz canteens

**Justification of measures**
$CO_2e$ from the food, and especially from meat and other animal products used in the TU Graz canteens, play a small but not insignificant role in reaching the goal of climate neutrality. In this context, reducing the amount of meat is the focus of the measures.

**Responsible SA working group**
WG GHG balance

**Responsible for implementation**
Workplace Health Management/Human Resources

**Description of measures**
Replacement of foods with high GHG emissions: meat and other animal products; increased use of organic, seasonal, and regional foods, and increased use of meat substitutes (e.g. soy); reduction of food waste.

**Duration**
From 2022 and on

**Milestones**
**End of 2024:** No beef, at least three vegetarian menus offered daily
**End of 2027**: The share of regional and organic food will be increased by at least 25%; pork will be reduced by 50%.
**End of 2030:** Only Austrian organic pork will be used for the remaining 50% pork share. 100% of the turkey and chicken meat will be purchased from Austrian organic farmers.

**Status of implementation**
Concept being developed by the TU Graz Health Management team, budgeting still under development.

## 8.2 Measures to reduce GHG emissions associated with the food offered at TU Graz buffets

**Justification of measures**
Reducing the amount of meat and other animal products served at TU Graz buffets can make a small but not insignificant contribution to reducing the annual $CO_2e$.

**Responsible SA working group**
WG GHG balance

**Responsible for implementation**
Workplace Health Management/Human Resources, Event Management

**Description of measures**
Replacement of foods with high GHG emissions: meat and other animal products; increased use of organic, seasonal, and regional foods.

**Duration**
From 2022 and on

**Milestones**
**End of 2024:** At least 3 vegetarian options will be offered, the share of seasonal, regional and organic food will be increased, no beef will be offered insofar as possible
**End 2027**: 100% sustainable coffee (organic and Fairtrade) and milk substitutes will be offered
**End 2030:** Pork share will be reduced by 50%, exclusively organic meat will be offered

**Status of implementation**
Guidelines are being drawn up by TU Graz's Health Management team in coordination with the Event Management team

ACTION AREA

# 9 Climate change adaptation and biodiversity

## 9.1 Measures that promote greening and biodiversity at all TU Graz locations

**Justification of measures**
The greenhouse effect is resulting in significantly more 'tropical' days (i.e. days with an air temperature maximum > 30 degrees Celsius). Trees and shrubs that create shade on and around the TU Graz campus can significantly and locally reduce temperatures and are highly appreciated by students and staff. The same applies to façade and roof greening. Larger mown meadows also contribute to urban biodiversity, as do the elements mentioned earlier. There are currently 1,100 trees on the TU Graz campuses.

**Responsible SA working group**
WG GHG balance

**Responsible for implementation**
Building and Technical Support

**Description of measures**
Continuation of annual greening measures (e.g. roof and façade greening), tree and shrub planting, measures to promote biodiversity (e.g. longer mowing intervals) according to the long-term overall master plan.

**Duration**
Ongoing

**Milestones**
**End of 2024:** Greening measures will be implemented according to master plan
**End of 2027:** Greening measures will be implemented according to master plan
**End of 2030:** Greening measures will be implemented according to master plan

**Status of implementation**
Continuing campus plantings according to the master plan; pilot project for façade greening IN 16-16c

ACTION AREA

# 10 Compensation

## 10.1 Measures beyond the TU Graz GHG balance that compensate for the (presumably) unavoidable GHG residual emissions in 2030

**Justification of measures**
By 2030, TU Graz plans to implement all technically feasible and financially justifiable measures within its own sphere of influence to reduce the GHG emissions for which it is (at least in part) responsible. Nevertheless, an unavoidable amount of about 20% of the GHG emissions described in the baseline 2017 balance will still remain in 2030. These include emissions caused, for example, by business trips with planes, commuter traffic with fossil-fuel cars, or by district heating. In order to achieve climate neutrality, TU Graz must compensate for this remaining amount of GHG emissions, i.e. carry out projects beyond the balance which remove GHG from the atmosphere or prevent GHG emissions. These projects must at least meet the following criteria: They are additional projects, are effective in the long-term, and their effects can be calculated.

**Responsible SA working group**
WG GHG balance

**Responsible for implementation**
Rectorate

**Description of measures**
From 2022 to 2024, 100% of the compensation by financing GHG emission-reducing research and development projects, and 50% of the compensation by financing these projects in the following years. From 2025 and on: 25% of the compensation by financing carbon-binding forest and tree projects, and 25% of the compensation by financing agricultural projects, if possible, in cooperation with Styrian farmers.

**Duration**
From 2022 and on

**Milestones**
**End of 2024**: TU Graz will invest funds in compensatory projects in the form of start-up financing.
**End of 2027**: TU Graz will invest funds in compensatory projects (in the form of start-up financing for GHG emission-reducing research and development projects, agricultural, and forest projects).
**End of 2030:** TU Graz will fully offset the unavoidable residual emissions.

**Status of implementation**
Concept being prepared by the Research and Technology House; talks being held with potential partner organisations