



Annual monitoring report

Results of the third period (05/2015-04/2016)

Three annual monitoring reports are released in the project GPP 2020. They provide information on the uptake of the project. They include facts, figures and results of

- a) the low-carbon tenders,
- b) the training seminars and
- c) the support activities aiming to establish permanent support structures on low-carbon procurement across Europe.

The third and last period that this monitoring report covers was dedicated to the tendering, to the finalisation of trainings and the finalisation of the implementation of support activities.

1 The GPP 2020 project

In recent years, awareness of green public procurement (GPP) has increased considerably. Tools, guidance and GPP criteria are now widely available in many countries. Yet, the vast majority of public tenders in Europe still do not incorporate effective environmental criteria and do not result in the purchase of sustainable solutions. The project GPP 2020 aimed to mainstream low-carbon procurement across Europe through the following activities:

- Project partners have implemented 113 low-carbon tenders and achieved a significant amount of reduction of greenhouse gas emissions.
- Training and networking events took place – both for procurers and procurement training providers.
- Permanent GPP support structures were implemented in the same eight target countries.

Through this, GPP 2020 contributed to the EU's target to reduce greenhouse gas emissions by 20 percent, increase the share of renewable energy by 20 percent and increase energy efficiency by 20 percent by 2020.

GPP 2020 is co-funded by the Intelligent Energy Europe programme of the European Commission.



2 Overview of the low-carbon tenders in the third project period

82 low-carbon tenders awarded and evaluated

In the 3rd period of the project GPP 2020 (05/2015-04/2016), 82 low carbon tenders were evaluated, adding to a total amount of 113 low-carbon tenders in the project. Actually there were even 83 tenders in this period (and a total of 114 tenders) if the tender “Lease-purchase of 781 vehicles” from the Catalan Government would also be considered. The Government recalled the tender model from the website due to the wrong emission data the company VW published for its vehicles. Therefore, this tender is not included in this report.

For 77 of the 82 tenders evaluated in this last project period, a tender model is published on the website. For 5 or the 82 tenders (ICT, Austria; ICT, Croatia; transformers, Croatia; bus, Netherlands; frost-free bicycle path, Netherlands), there is additional information on the website instead of a tender model.

The following figure shows the number of tenders in the different product groups. More than 50 % of the tenders are tenders for ICT-appliances, vehicles and energy.

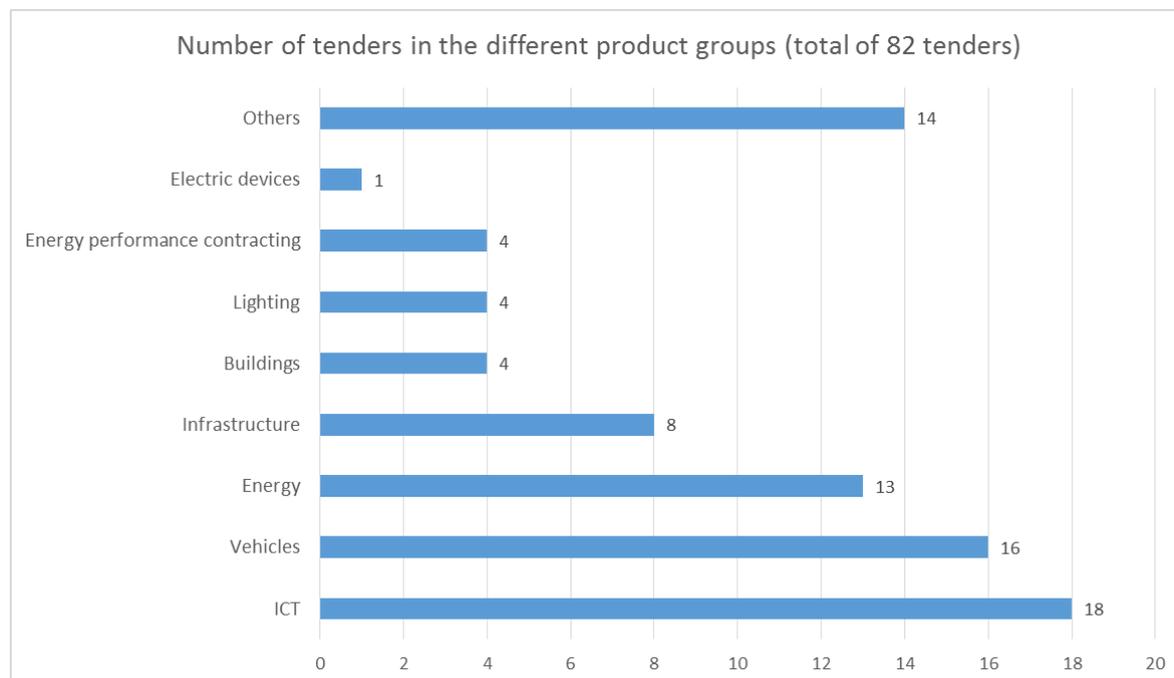


Fig. 1: Number of tenders in the different product groups



Procurement approach

For most of the tenders, an open procedure was chosen. In some cases like the tender for heat supply with wood or a tender for electricity, the public procurer chose a negotiated procedure. And only once, the public procurer carried out a competitive dialogue.

Like in the tenders that were evaluated in the previous two periods, a comparable amount was awarded to the tender with the best price-quality ratio and to the tender with the best price. This shows again, that the identification of the most advantageous tender based only on the price can also lead to green contracts if the low-carbon criteria are included in the technical specifications and/or in contract clauses. Therefore, the award principle “lowest price” is not per se unambitious – it can even be better to include the low carbon criteria in the technical specifications and thus make them mandatory. This avoids including them in the award criteria where they would normally only account for a small percentage share of the overall points.

Furthermore, several tenders used life-cycle costing to identify the most advantageous tender. For example, the tender from the Municipality of Maribor (Slovenia) about the purchase of low emission buses for Municipal Public Transport or the tender for an emergency electricity supply for civil protection by the Procurement Office of the German Federal Ministry of the Interior.

Reduction of CO₂-emissions and energy consumption

The solutions procured within the 82 tenders are going to emit **734,985 t CO₂e¹** less greenhouse gases (GHG) and are going to consume **124,019 toe** less energy compared to the benchmark. They are going to trigger the production of **83,449 toe** renewable energy. The CO₂e-reductions and the energy reductions achieved are shown in figure 2. The benchmark of each of the tenders is described below.

The 82 tenders are not carbon neutral. They are still going to emit more than **1,164,000 t CO₂e** greenhouse gas. However, they are going to emit around 39 % less greenhouse gas compared to the benchmark.

The following figure shows number of tenders in the different product groups as well as the reduction of greenhouse gases and energy achieved per product group.

¹ For some product groups, CO₂-emissions were calculated, for others CO₂-equivalents were taken. Furthermore, with the exception of infrastructure, only those emissions that occurred during the use phase of the life cycle were included. Emissions from the production and disposal were not included. The detailed methodology how GPP 2020 calculates savings is described here: <http://www.gpp2020.eu/low-carbon-tenders/measuring-savings>.

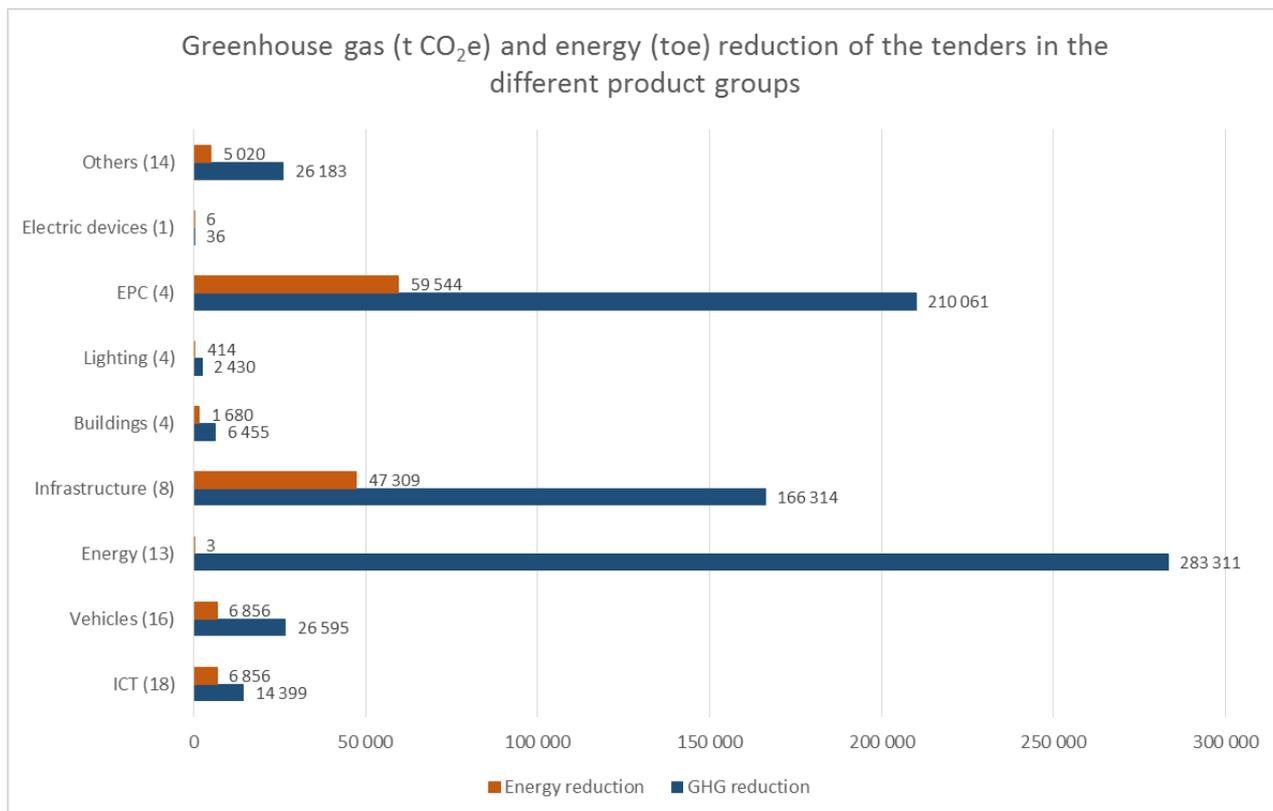


Fig. 2: CO₂e-reduction and energy reduction realised by the 82 low-carbon tenders

The figure shows that even if the number of ICT- and vehicle-tenders is high, the amount of GHG savings is small compared to the savings that the tenders for energy, energy performance contracting (EPC) and infrastructure offer. In each of these three groups there are one or two tenders with a very high amount of GHG-savings:

- Energy Performance Contracting (EPC): The high amount of savings achieved by the EPC-tenders is due to a tender by CONSIP (Italy) for EPC in the health sector. The winning bid offered 25 % energy savings compared to the current situation.
- Energy: The high amount of savings are due to a tender from the Central Procurement Office, Croatia, and a tender from the Barcelona City Council. Each of them tendered several million kWh of electricity from 100 % renewable sources.
- Infrastructure: In the product group infrastructure, the high GHG savings are mainly due to two tenders from Rijkswaterstaat: A tender for the Construction of the Sea Entrance IJmond and the reconstruction of the A6 Almere.



The Benchmark

For the calculation of CO₂e- and energy-reductions of low-carbon tenders, different benchmarks were chosen. Sometimes, if the last tender took place only some years ago and the products offered by the market did not change much, the solution awarded in the last tender was chosen. Sometimes, the benchmark was an average product or design available on the market or – in cases where it was difficult to define the average solution on the market – a reference product or design chosen by the public authority. We tried to avoid referring to the worst product or solution on the market.

It should be noted that it isn't reasonable to choose the same reference value for each product group in order to present robust results because the reference value has to take into account among others the state of the national market and the dynamics of the market development.

The benchmark chosen in the each of the tenders is mentioned below.

3 The tenders in detail

The following chapter offers facts and results of the 82 low-carbon tenders.

Vehicles



Overview of the tenders

- Tender 1: Medical transport services, Catalan Health Service, Government of Catalonia
- Tender 2: Leasing of 74 vans, Roads Directorate General, Government of Catalonia
- Tender 3: Lease-purchase of 589 vehicles, HEP Ltd., Croatian Energy Company
- Tender 4: Leasing of an electric vehicle, Procurement Office of the German Federal Ministry of the Interior
- Tender 5: Rental-purchase of 12 electric vehicles, OesteCIM, Portugal
- Tender 6: Renting of 30 electric scooters, Barcelona City Council, Spain
- Tender 7: Purchase of luxury class cars and electric cars, Federal Procurement Agency Austria
- Tender 8: Purchase of a minimum of 12 fully electric vehicles, Barcelona Metropolitan Area
- Tender 9: Purchase of 8 electric vehicles, Zagreb Holding, Croatia
- Tender 10: Purchase of 133 vehicles, Ministry of Public Administration, Slovenia



- Tender 11: Purchase of 1 bus, Municipality of Alcobaca, Portugal
- Tender 12: Purchase of 5 buses, Municipality of Maribor, Slovenia
- Tender 13: Purchase of 11 buses, Municipality of Maribor, Slovenia
- Tender 14: Purchase of 30 buses, Ljubljana Public Transport, Slovenia
- Tender 15: Concession for a zero emission bus transport, Netherlands
- Tender 16: Purchase of minibuses (CNG), Croatia

Differences of the tenders

In five of the 16 tenders, either the Lifecycle costs (LCC) of the vehicles or the Total-costs-of-Ownership (TCO) were used as award criteria. While TCO include only costs that really arise for the public authorities, LCC also include external costs like costs for greenhouse gases that are not paid or that are paid only indirectly.

Energy- and CO₂e-savings² per tender

Tender 1 (Medical transport services):

- Energy savings: **5 096 TOE**
- CO₂-savings: **1,262 t CO₂e**
- Benchmark: Vehicles used previously

Tender 2 (Leasing of 74 vans):

- Energy savings: **63 TOE**
- CO₂-savings: **203 t CO₂e**
- Benchmark: Replaced vehicles

Tender 3 (Lease-purchase of 589 vehicles):

- Energy savings: **933 TOE**
- CO₂-savings: **2,973 t CO₂e**
- Benchmark: Standard vehicles

Tender 4 (Leasing of 1 electric vehicle):

- Energy savings: **0.1 TOE**
- CO₂-savings: **0.2 t CO₂e**
- Benchmark: E-vehicle with a smaller range and a petrol car as addition

² The calculation was conducted with the calculator designed in the project.



Tender 5 (Rental-purchase of 12 electric vehicles):

- Energy savings: **38 TOE**
- CO₂-savings: **88 t CO₂e**
- Benchmark: Replaced vehicles

Tender 6 (Renting of 30 electric scooters):

- Energy savings: **24 TOE**
- CO₂-savings: **88 t CO₂e**
- Benchmark: Replaced scooters

Tender 7 (Purchase of 153 luxury class cars and 18 electric vehicles):

- Energy savings: **252 TOE**
- CO₂-savings: **811 t CO₂e**
- Benchmark: Last tender (2012)

Tender 8 (Purchase of 12 electric vehicles):

- Energy savings: **17 TOE**
- CO₂-savings: **63 t CO₂e**
- Benchmark: Standard vehicles currently on the market

Tender 9 (Purchase of 8 electric vehicles):

- Energy savings: **43 TOE**
- CO₂-savings: **126 t CO₂e**
- Benchmark: Standard vehicle currently available on the market

Tender 10 (Purchase of 133 vehicles):

- Energy savings: **255 TOE**
- CO₂-savings: **728 t CO₂e**
- Benchmark: Last tender (2010)

Tender 11 (Purchase of 1 bus):

- Energy savings: **79 TOE**
- CO₂-savings: **252 t CO₂e**
- Benchmark: Standard vehicles currently on the market

Tender 12 (Purchase of 5 buses):

- Energy savings: **519 TOE**
- CO₂-savings: **1,664 t CO₂e**



- Benchmark: Replaced vehicles

Tender 13 (Purchase of 11 buses):

- Energy savings: **1,044 TOE**
- CO₂-savings: **3,345 t CO₂e**
- Benchmark: Last tender

Tender 14 (Purchase of 30 buses):

- Energy savings: **2,216 TOE**
- CO₂-savings: **10,620 t CO₂e**
- Benchmark: Standard vehicles currently on the market

Tender 15 (Concession for a zero emission bus transport):

- Energy savings: **10 TOE**
- CO₂-savings: **200 t CO₂e**
- Benchmark: Last tender

Tender 16 (Purchase of 16 minibuses (CNG)):

- Energy savings: **81 TOE**
- CO₂-savings: **338 t CO₂e**
- Benchmark: Standard vehicles currently on the market

The following figure shows the savings of greenhouse gases (GHG) and energy for the 16 tenders for vehicles. The number of vehicles tendered, the different distances that are probably driven during lifetime and the benchmark vary for each tender. Therefore, the savings of the tenders cannot be compared. In anyway, the figure shows that tenders for normal sized buses offered higher savings than tenders for cars.

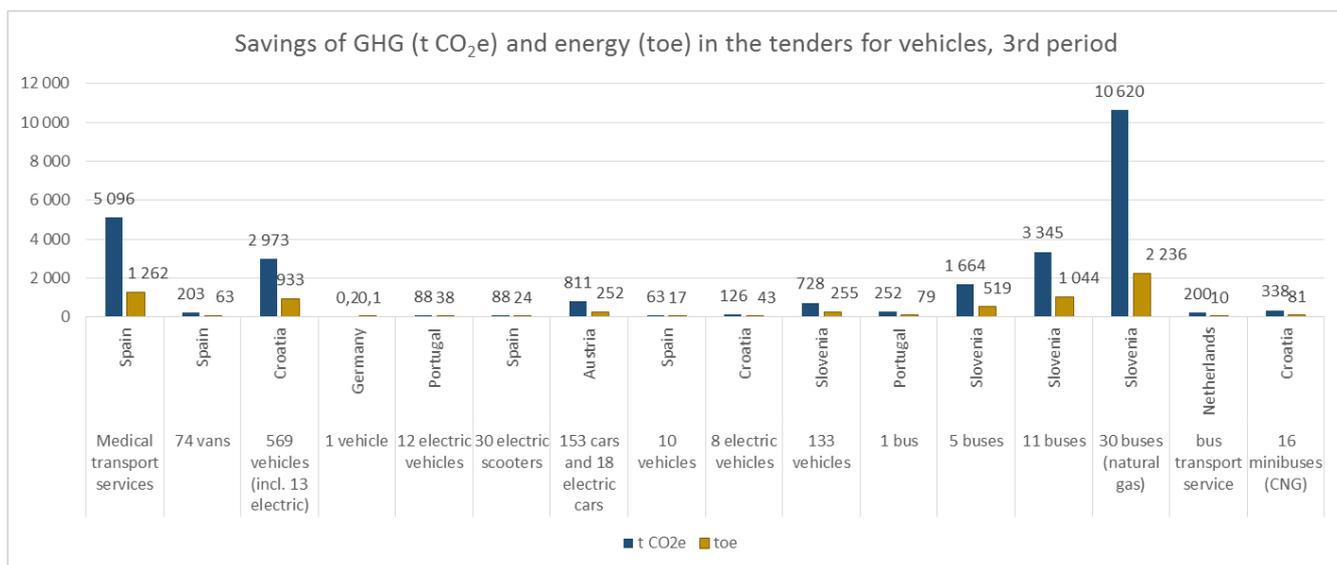


Fig. 3: Savings of GHG and energy in the 16 tenders for vehicles

Highlights of low carbon tenders

The tender model for medical transport services (tendered by the Catalan Health Service, Government of Catalonia) reveals the remarkable number of requirements that have to be included next to environmental considerations. For the Urgent Medical Transport Services, 3.5 points out of 100 were awarded for environmental criteria. This may seem low, but in this contract many different elements were in play (some of them with an environmental impact, too), for example:

- availability, age and number of vehicles dedicated to the service
- facilities used to house and maintain vehicles
- the annual program for training personnel
- organization, operational systems, the system for managing complaints and suggestions and the planning of the use and distribution of vehicles
- improvement in the adaptations to vehicles so that they can carry electric wheelchairs, especially large individuals and child-restraint systems
- improvements to mechanical revision and the safety of individuals, interior cleaning and disinfection and exterior cleaning
- additional training for personnel in the use of automated external defibrillators, efficient driving, workplace safety and qualification of technicians for medical emergencies
- a study of customer satisfaction involving planning, a survey of satisfaction, the organization of results and the application of improvements.



ICT-appliances³



Overview of the tenders

- Tender 1: Purchase of 48,300 Laptops, Federal Procurement Agency, Austria
- Tender 2: Purchase of 55,400 Desktop-PCs, Federal Procurement Agency, Austria
- Tender 3: Purchase of 260 energy efficient Notebooks, Association of Municipalities and Towns of Slovenia
- Tender 4: Purchase of EE ICT equipment, Zagreb City Holding, Croatia
- Tender 5: Supply of energy efficient ICT equipment (80 Desktop-PCs and 80 Displays), Energy Efficiency Fund, Croatia
- Tender 6: Purchase of 1,800 Desktop-PCs, 3,000 PCs-Mini, 620 Notebooks, Umweltverband Vorarlberg, Austria
- Tender 7: Purchase of 25 Thin clients, OesteCIM, Portugal
- Tender 8: Purchase of 1 Desktop-PC, 1 display and 3 notebooks, City of San Giuseppe Vesuviano, Italy
- Tender 9: Purchase of 145,000 Displays, Procurement Office of the German Federal Ministry of the Interior
- Tender 10: Procurement of 90,000 energy efficient Desktop-PCs and 90,000 Displays, CONSIP, SpA, Italy
- Tender 11: Renting of a full service MFD-equipment (140 devices), Autonomous Province of Bolzano Alto Adige, Italy
- Tender 12: Renting of 30 printing devices and 470 MFD, Region Veneto, Italy
- Tender 13: Renting of 4 imaging devices, OesteCIM, Portugal
- Tender 14: Renting of 369 MFD, Municipality of Loures, Portugal
- Tender 15: Renting of 14 MFD, LIPOR, Portugal
- Tender 16: Purchase and maintenance of 24 MFD, Barcelona Metropolitan Area, Spain
- Tender 17: Purchase of 21 scanners and 15 MFD, Region Siciliana, Italy
- Tender 18: Re-use of IT-appliances, Federal Procurement Agency, Austria

Differences of the tenders

In the majority of tenders, the IT-appliances were purchased. Only in a small number of tenders, the devices were rented. The renting of IT-appliances is sometimes connected to GPP and to

³ The calculation was conducted with the calculator designed in the project.



circular procurement because in rental agreements the supplier can be obligated to re-use or recycle the devices. Yet, as long as the contracts do not include provisions for re-use or recycling, they do not offer an additional environmental benefit.

Energy- and CO₂-savings⁴ per tender and results

Tender 1 (Purchase of 48,300 Laptops):

- Energy savings: **33 TOE**
- CO₂-savings: **108 t CO₂e**
- Benchmark: Last tender (2014)

Tender 2 (Purchase of 55,400 Desktop-PCs)

- Energy savings: **307 TOE**
- CO₂-savings: **999 t CO₂e**
- Benchmark: Last tender (2014)

Tender 3 (Purchase of 260 notebooks)

- Energy savings: **10 TOE**
- CO₂-savings: **42 t CO₂e**
- Benchmark: Average solution currently available on the market

Tender 4 (Purchase of energy efficient ICT)

- Energy savings: **2 TOE**
- CO₂-savings: **8 t CO₂e**
- Benchmark: Average solution currently available on the market

Tender 5 (Purchase of 80 Desktop-PCs and 80 Displays)

- Energy savings: **4 TOE**
- CO₂-savings: **13 t CO₂e**
- Benchmark: Average solution currently available on the market

Tender 6 (Purchase of 1,800 Desktop-PCs, 3,000 PCs-Mini, 620 Notebooks)

- Energy savings: **95 TOE**
- CO₂-savings: **308 t CO₂e**
- Benchmark: Average solution currently available on the market

Tender 7 (Purchase of 25 Thin clients)

⁴ The calculation was conducted with the calculator designed in the project.



- Energy savings: **0.3 TOE**
- CO₂-savings: **2.5 t CO₂e**
- Benchmark: Average solution currently available on the market

Tender 8 (Purchase of 1 Desktop-PCs, 1 display and 3 notebooks)

- Energy savings: **0.1 TOE**
- CO₂-savings: **0.3 t CO₂e**
- Benchmark: Average solution currently available on the market

Tender 9 (Purchase of 145,000 Displays)

- Energy savings: **460 TOE**
- CO₂-savings: **2,693 t CO₂e**
- Benchmark: Offer with the highest energy consumption

Tender 10 (Purchase of 80,000 Desktop-PCs and 80,000 Displays)

- Energy savings: **1,096 TOE**
- CO₂-savings: **5,162 t CO₂e**
- Benchmark: Average solution currently available on the market

Tender 11 (Renting of a full-service MFD equipment)

- Energy savings: **11 TOE**
- CO₂-savings: **50 t CO₂e**
- Benchmark: Average solution currently available on the market

Tender 12 (Renting of 30 printing devices and 470 MFD)

- Energy savings: **17 TOE**
- CO₂-savings: **129 t CO₂e**
- Benchmark: Previous situation

Tender 13 (Renting of 4 imaging devices)

- Energy savings: **0.1 TOE**
- CO₂-savings: **0.6 t CO₂e**
- Benchmark: Average solution currently available on the market (energy star device)

Tender 14 (Renting of 368 MFD)

- Energy savings: **8 TOE**
- CO₂-savings: **48 t CO₂e**
- Benchmark: Average solution currently available on the market (energy star device)



Tender 15 (Renting of 14 MFD)

- Energy savings: **0.3 TOE**
- CO₂-savings: **1.9 t CO₂e**
- Benchmark: Average solution currently available on the market (energy star device)

Tender 16 (Purchase and maintenance of 24 MFD)

- Energy savings: **3 TOE**
- CO₂-savings: **10 t CO₂e**
- Benchmark: Average solution currently available on the market (energy star device)

Tender 17 (Purchase of 21 scanners and 15 MFD)

- Energy savings: **0.3 TOE**
- CO₂-savings: **1.2 t CO₂e**
- Benchmark: Average solution currently available on the market (energy star device)

Tender 18 (Re-use of IT-appliances (calculation for 36,000 notebooks)):

- Energy savings: **1,141 TOE**
- CO₂-savings: **4,823 t CO₂e**
- Benchmark: Disposal

The following figure shows the savings of greenhouse gases (GHG) and energy for the 18 ICT-tenders.

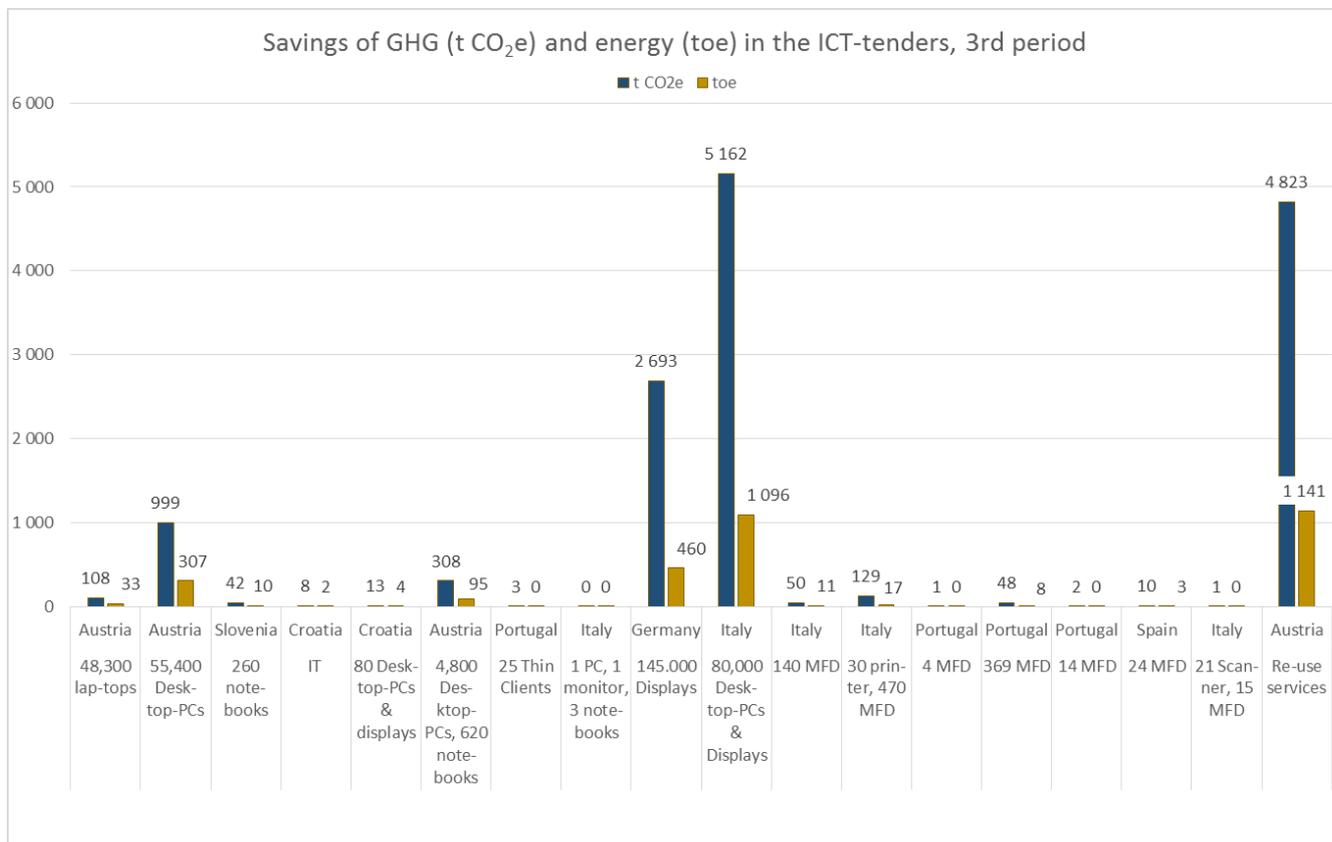


Fig. 4: Savings of GHG and energy in the 18 ICT-tenders

The savings of ICT-devices are less diverse than the savings for vehicles. Usually, the higher the number of tendered devices, the higher the savings. That is not completely true for the three Austrian tenders. Even if the numbers of devices are high – 48,300 laptops, 55,400 Desktop-PCs and 4,800 Desktop-PCs & 620 notebooks – the GHG-savings are relatively small. This is due to the fact, that the low carbon tender was compared to the previous tender, which already asked for Energy Efficiency.

Furthermore, the figure shows high savings (on the right) for re-use-services. The re-use and the prolongation of the lifetime of ICT-devices offers a high amount of savings. If less devices have to be produced, the energy consumption in the production phase, which is considerable, decreases.

Highlights of low carbon tenders

The Service of the recovery of old IT-appliances is offered through the Federal Procurement Agencies' "Platform for Direct Awards" (DVP). This platform presents the suppliers with whom the Federal Procurement Agency (FPA) concluded a user agreement. The service covers the following modules:





collection of appliances, certified data deletion, destruction of the data carrier, processing of the appliances, management of empty toner cartridges, remarketing, environmentally responsible disassembling or disposal, coaching and consulting on remarketing.

Energy

Overview of the tenders

- Tender 1: Heat supply with wood, Federal Procurement Agency, Austria
- Tender 2: Installation, fuel supply and maintenance of a biomass furnace, Town Council of Saint Julià de Vilatorca, Spain
- Tender 3: Emergency Electricity, Procurement Office of the German Federal Ministry of the Interior
- Tender 4: Rental and purchase of photovoltaic charging stations for electric vehicles, OesteCIM, Portugal
- Tender 5: Purchase of Electricity, Department of Economy and Knowledge, Government of Catalonia
- Tender 6: Purchase of Electricity, Student Centre of the University and the Polytechnic College Rijeka, Croatia
- Tender 7: Purchase of Electricity, Central Procurement Office, Croatia
- Tender 8: Purchase of Electricity, Municipality of Ljubljana, Slovenia
- Tender 9: Purchase of Electricity, Ministry of Public Administration, Slovenia
- Tender 10: Purchase of Electricity, OesteCIM, Portugal
- Tender 11: Purchase of Electricity, Cascais, Portugal
- Tender 12: Purchase of Electricity, LIPOR, Portugal
- Tender 13: Purchase of Electricity, Metropolitan City of Rome Capital, Italy

Differences of the tenders

The minimum percentage of energy from renewable sources is different in the tenders. Some tenders ask for 100 % energy from renewable sources while others ask “only” for 30, 40 or 80 %.



Energy- and CO₂-savings⁵ per tender

Tender 1 (Heat supply with wood):

- Energy savings: **0 toe**
- CO₂-savings: **23,120 t CO₂e**
- Renewable energy triggered: **7,237 toe**
- Benchmark: Last tender

Tender 2 (Installation, fuel supply and maintenance of a biomass furnace):

- Energy savings: **0 toe**
- CO₂-savings: **340 t CO₂e**
- Renewable energy triggered: **127 toe**
- Benchmark: Last tender

Tender 3 (Emergency Electricity):

- Energy savings: **3 toe**
- CO₂-savings: **9 t CO₂e**
- Benchmark: least energy efficient offer

Tender 4 (Rental and purchase of photovoltaic charging stations for electric vehicles):

- Energy savings: **0 toe**
- CO₂-savings: **29 t CO₂e**
- Renewable energy triggered: **13 toe**
- Benchmark: National electricity mix

Tender 5 (Purchase of 1,266 Mio kWh Electricity, 30 % from renewable sources):

- Energy savings: **0 toe**
- CO₂-savings: **75,166 t CO₂e**
- Renewable energy triggered: **24,206 toe**
- Benchmark: Last tender (15 % from renewable sources)

Tender 6 (Purchase of 2.5 Mio kWh Electricity, 30 % from renewable sources):

- Energy savings: **0 toe**
- CO₂-savings: **214 t CO₂e**

⁵ The calculation was conducted with the calculator designed in the project.



- Renewable energy triggered: **64 toe**
- Benchmark: Last tender (15 % from renewable sources)

Tender 7 (Purchase of 438.3 Mio kWh Electricity, 100 % from renewable sources):

- Energy savings: **0 toe**
- CO₂-savings: **126,230 t CO₂e**
- Renewable energy triggered: **37,688 toe**
- National electricity mix

Tender 8 (Purchase of 278.0 Mio kWh Electricity, 100 % from renewable sources):

- Energy savings: **0 toe**
- CO₂-savings: **45,535 t CO₂e**
- Renewable energy triggered: **11,951 toe**
- Benchmark: Last tender (50 % from renewable sources)

Tender 9 (Purchase of 214.4 Mio kWh Electricity, 80 % from renewable sources):

- Energy savings: **0 toe**
- CO₂-savings: **4,917 t CO₂e**
- Renewable energy triggered: **1,291 toe**
- Benchmark: Original tender which was reopened after 2 years (70 % electricity from renewable sources)

Tender 10 (Purchase of 85.1 Mio kWh Electricity, 40 % from renewable sources):

- Energy savings: **0 toe**
- CO₂-savings: **3,758 t CO₂e**
- Renewable energy triggered: **585 toe**
- Benchmark: Last tender (32 % from renewable sources)

Tender 11 (Purchase of 29.6 Mio kWh Electricity, 48.5 % from renewable sources):

- Energy savings: **0 toe**
- CO₂-savings: **2,699 t CO₂e**
- Renewable energy triggered: **204 toe**
- Benchmark: Last tender (32 % from renewable sources)



Tender 12 (Purchase of 1.3 Mio kWh Electricity, 100 % from renewable sources):

- Energy savings: **0 toe**
- CO₂-savings: **488 t CO₂e**
- Renewable energy triggered: **76 toe**
- Benchmark: Benchmark: Last tender (32 % from renewable sources)

Tender 13 (Purchase of 42,000 kWh Electricity, 100 % from renewable sources):

- Energy savings: **0 toe**
- CO₂-savings: **16 t CO₂e**
- Renewable energy triggered: **4 toe**
- Benchmark: National electricity mix

The following figures shows the GHG-savings of the energy-contracts and the amount of green energy they have triggered.

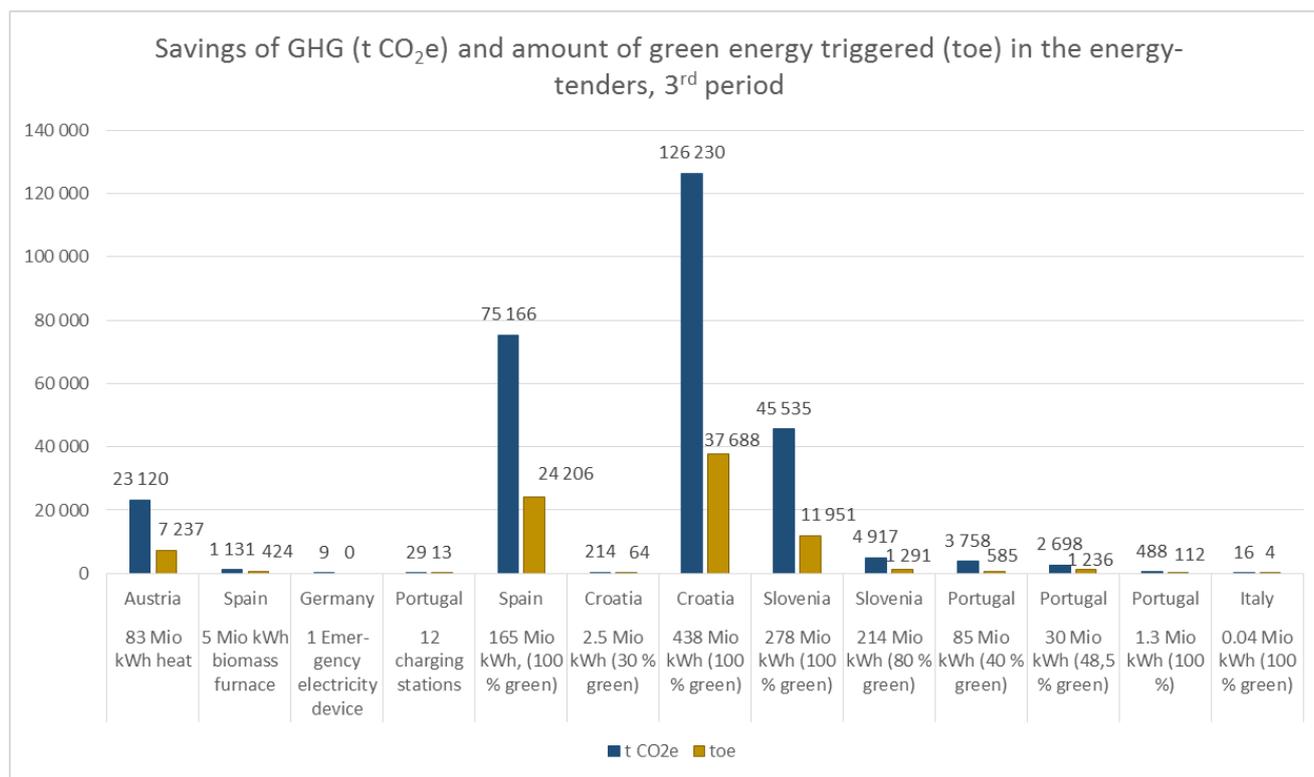


Fig. 5: Savings of GHG and energy in the 13 tenders for energy



The figure shows that there is no constant correlation between the savings of GHG emissions and the amount of tendered energy. This is due to the fact that the last tender was often chosen as a benchmark. If the last tender had a low percentage of renewable energy, the GHG savings of the tender were usually higher. If the percentage was high, the savings were lower. The figure also shows a correlation between the amount of green energy triggered and the amount of GHG savings. The higher the triggered renewable energy, the higher the GHG savings.

Energy performance contracting

Overview of the tenders

- Tender 1: Energy Audit services, Federal Procurement Agency, Austria
- Tender 2: Energy efficiency services for school buildings, Province of Barcelona, Ministry of Education, Government of Catalonia
- Tender 3: Energy Performance Contracting and maintenance service, National Art Museum of Catalonia, Ministry of Culture, Government of Catalonia
- Tender 4: Energy Performance Contracting in the health sector, CONSIP, SpA, Italy

Differences of the tenders

The minimum savings guaranteed by the supplier of the Energy Performance Contract were different. They range between 13 and 25 %.

Energy- and CO₂-savings and results per tender

Tender 1 (Energy Audit services, reduction: 15 %):

- Energy savings: **440 TOE**
- CO₂-savings: **1,150 t CO₂e**
- Benchmark: Without Energy Audit services

Tender 2 (Energy performance contracting, EPC, schools, reduction: 15 %)

- Energy savings: **204 TOE**
- CO₂-savings: **548 t CO₂e**
- Benchmark: Without EPC

Tender 3 (EPC museum, reduction: 20 %)

- Energy savings: **788 TOE**
- CO₂-savings: **2,616 t CO₂e**



- Benchmark: Without EPC

Tender 4 (EPC health sector)

- Energy savings: **58,122 TOE**
- CO₂-savings: **205,747 t CO₂e** (reduction: 25%)
- Benchmark: Without EPC

The savings offered by the four tenders are shown in the following figure.

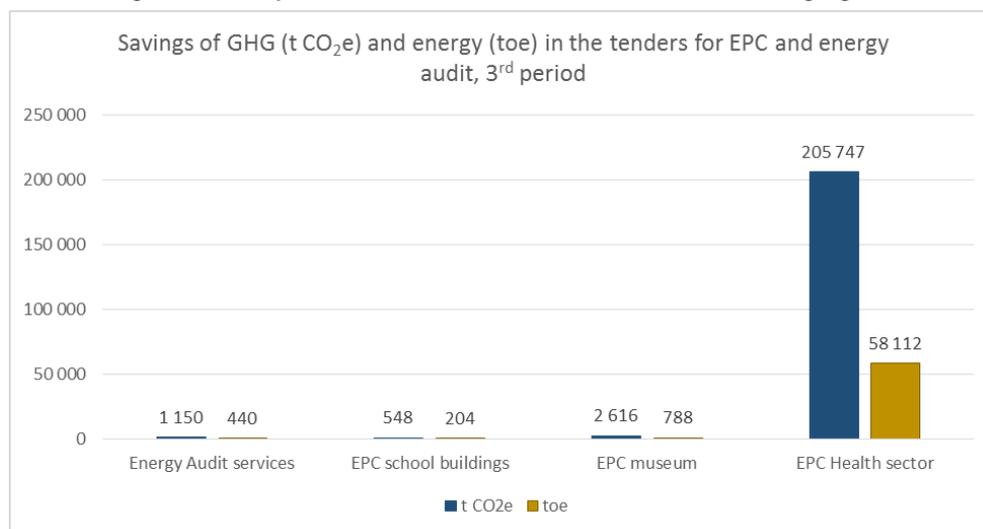


Fig. 6: Savings of GHG and energy in the tenders for Energy Performance Contracting (EPC) and Energy Audit

The guaranteed savings of the three EPC-contracts were different. In the first EPC-contract (school buildings) between 13-18 % savings were guaranteed, in the second (museum) 20 % and in the third (Health sector) 25 %. The high amount of savings in the tender for EPC in the Health Sector is not only due to the high amount of guaranteed savings but mainly to the high number of building/facility systems that are going to use the framework contract.

Lighting

Overview of the tenders

- Tender 1: LED street lighting, Municipality of Tkon, Croatia
- Tender 2: Lighting equipment, Procurement Office of the German Federal Ministry of the Interior
- Tender 3: Purchase of portable lighting masts with LED, Procurement Office of the German Federal Ministry of the Interior



- Tender 4: LED street lighting, Municipality of Zupa Dubrovacka, Croatia

Similarities of the tenders

Each of the tenders asked for LED technology.

Energy- and CO₂-savings and results per tender

Tender 1 (LED street lighting):

- Energy savings: **9 TOE**
- CO₂-savings: **32 t CO₂e**
- Benchmark: Conventional lighting solution

Tender 2 (Lighting equipment)

- Energy savings: **320 TOE**
- CO₂-savings: **2,118 t CO₂e**
- Benchmark: Conventional light bulbs

Tender 3 (Portable lighting masts with LED):

- Energy savings: **67 TOE**
- CO₂-savings: **214 t CO₂e**
- Benchmark: Lighting masts with conventional technology

Tender 4 (LED street lighting):

- Energy savings: **19 TOE**
- CO₂-savings: **66 t CO₂e**
- Benchmark: Conventional lighting solution

The following figure shows the savings of GHG and energy offered by the tenders for lighting. Three of the tenders asked for street lighting (once in a “portable” form), one tender asked for light bulbs. If there were a figure that showed the savings compared to the value of the tender, the tender for light bulbs would be best, because no costs for installation had to be included.

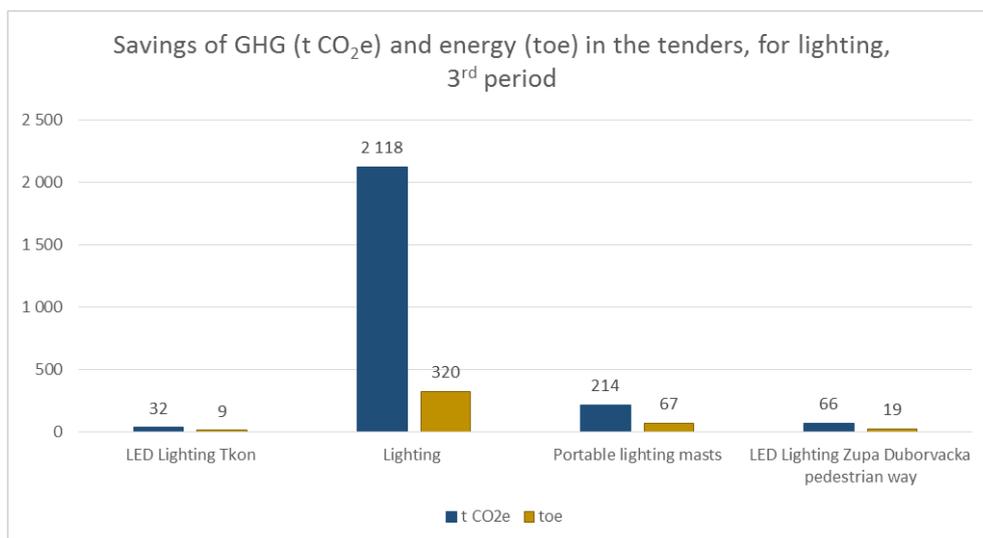


Fig. 7: Savings of GHG and energy in the tenders for lighting

Infrastructure



Overview of the tenders

- Tender 1: Road maintenance, City of Rome Capital, Italy
- Tender 2: Construction of the third chamber at the Beatrix Locks, Rijkswaterstaat, The Netherlands
- Tender 3: Reconstruction motorway A6 Almere, Rijkswaterstaat, The Netherlands
- Tender 4: Construction of the Sea Entrance Ijmuiden, Rijkswaterstaat, The Netherlands
- Tender 5: Renovation of a cycle path in Apeldoorn, Municipality of Apeldoorn, The Netherlands
- Tender 6: Park and Ride Area, Municipality of Nijmegen, The Netherlands
- Tender 7: Frost free bicycle path, Province of Southern Netherlands, The Netherlands
- Tender 8: Sewage system, Municipality of Eindhoven, The Netherlands

Similarities of the tenders

Seven of the tenders are from the Netherlands. They all used the same award principle that was described in the first and the second EU monitoring report. They offered a fictive price reduction to those suppliers that a) were energy efficient as a company due to an environmental management system and b) were going to use a green product (calculated with the help of DuboCalc).



Energy- and CO₂-savings⁶ per tender and results

Tender 1 (Road maintenance):

- Energy savings: **14 TOE**
- CO₂-savings: **7 t CO₂e**
- Benchmark: No recycled bituminous mix, not cold laid

Tender 2 (Construction of the third chamber at the Beatrix Locks):

- Energy savings: **6,612 TOE**
- CO₂-savings: **23,200 t CO₂e**
- Benchmark: Defined by the tenderer

Tender 3 (Reconstruction motorway A6 Almere):

- Energy savings: **15,048 TOE**
- CO₂-savings: **52,800 t CO₂e**
- Benchmark: Defined by the tenderer

Tender 4 (Construction of the Sea Entrance IJmuiden):

- Energy savings: **25,262 TOE**
- CO₂-savings: **88,639 t CO₂e**
- Benchmark: Defined by the tenderer

Tender 5 (Renovation of a cycle path in Apeldoorn):

- Energy savings: **106 TOE**
- CO₂-savings: **475 t CO₂e**
- Benchmark: Conventional solution

Tender 6 (Park and Ride Area):

- Energy savings: **12 TOE**
- CO₂-savings: **112 t CO₂e**
- Benchmark: Conventional solution

Tender 7 (Frost free bicycle path):

- Energy savings: **230 TOE**
- CO₂-savings: **1,026 t CO₂e**
- Benchmark: Conventional solution

⁶ The calculation was conducted with the calculator designed in the project.



Tender 8 (Sewage System):

- Energy savings: **55 TOE**
- CO₂-savings: **12 t CO₂e**
- Benchmark: Conventional solution

The following figure show the savings of GHG and energy offered by the infrastructure tenders.

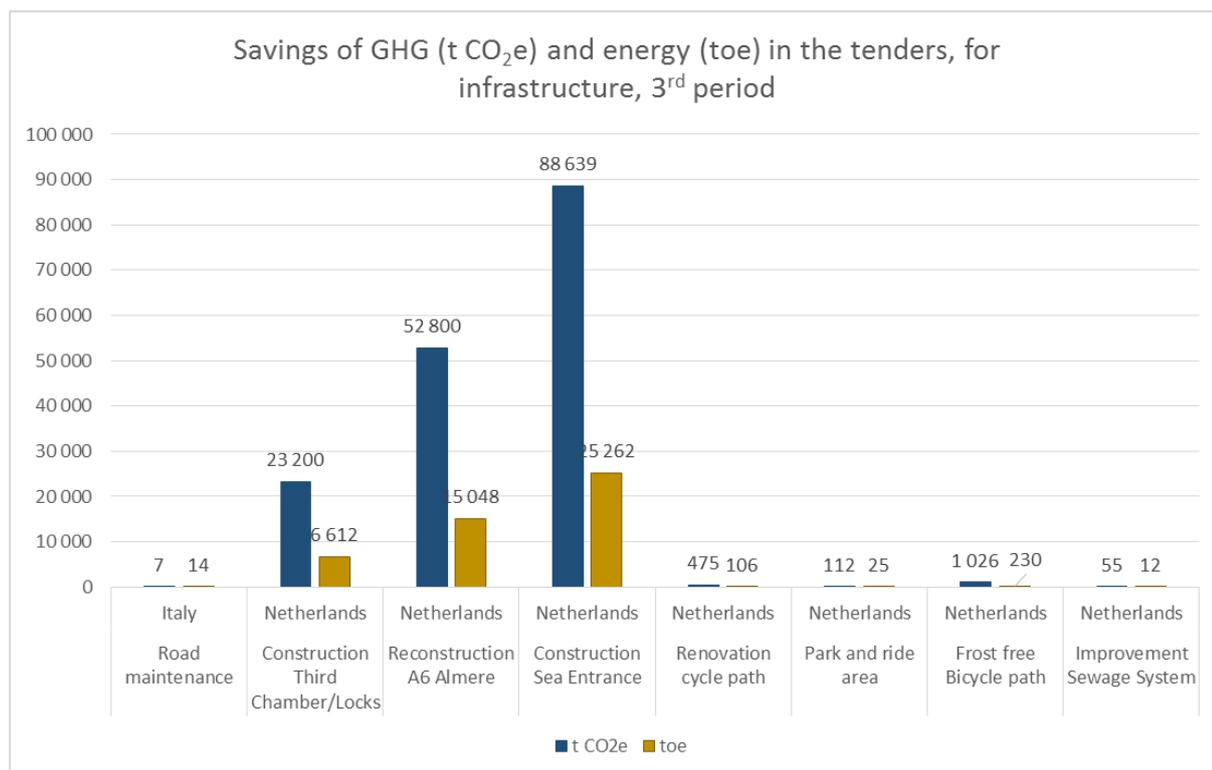


Fig. 8: Savings of GHG and energy in the tenders for infrastructure

Buildings

Overview of the tenders

- Tender 1: Reconstruction of a building, National Park Risnjak, Croatia
- Tender 2: Reconstruction of a building, Nature Park Papuk, Croatia
- Tender 3: Renovation of the ex INPS building, State Property Office, Region Liguria, Italy
- Tender 4: Renovation of the Ivan Glinsek Kindergarten, Municipality of Maribor



Energy- and CO₂-savings and results per tender

Tender 1 (Reconstruction of a building):

- Energy savings: **310 TOE**
- CO₂-savings: **1,221 t CO₂e**
- Benchmark: Previous situation

Tender 2 (Reconstruction of a building):

- Energy savings: **97 TOE**
- CO₂-savings: **283 t CO₂e**
- Benchmark: Previous situation

Tender 3 (Renovation of a building):

- Energy savings: **1,230 TOE**
- CO₂-savings: **4,680 t CO₂e**
- Benchmark: Previous situation

Tender 4 (Renovation of a kindergarten):

- Energy savings: **43 TOE**
- CO₂-savings: **261 t CO₂e**
- Benchmark: Previous situation

The savings are shown in the figure below.

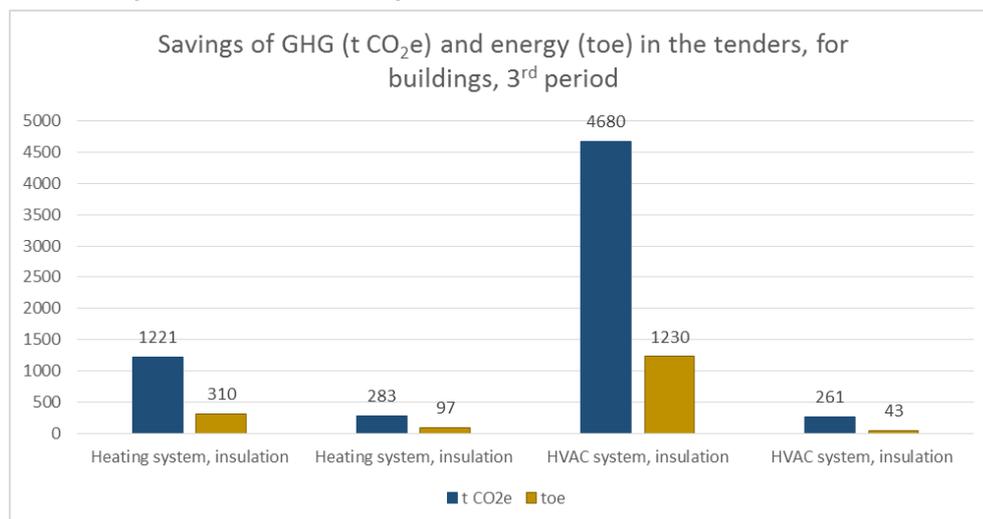


Fig. 9: Savings of GHG and energy in the tenders for buildings



White and brown goods

Overview of the tenders

- Tender 1: Industrial dishwasher, Procurement Office of the German Federal Ministry of the Interior

Energy- and CO₂-savings and results per tender

Tender 1 (Industrial dishwasher):

- Energy savings: **6 TOE**
- CO₂-savings: **36 t CO₂e** (reduction: 20%)
- Benchmark: Last tender (2014)

Other product groups

Overview of the tenders

- Tender 1: Video interpretation services, Federal Procurement Agency, Austria
- Tender 2: Supply of poultry meat, Federal Procurement Agency, Austria
- Tender 3: Supply of dairy products, Federal Procurement Agency, Austria
- Tender 4: Purchase of recycled LDPE-bags, Environmental protection and energy efficiency fund, Croatia
- Tender 5: Printing and supply of printed matter I, Procurement Office of the German Federal Ministry of the Interior
- Tender 6: Printing and supply of printed matter II, Procurement Office of the German Federal Ministry of the Interior
- Tender 7: Purchase of printed materials, Metropolitan City of Rome Capital, Italy
- Tender 8: Purchase of paper reams. Autonomous Province of Bolzano Alto Adige, Italy
- Tender 9: Supply of recycled cartridges for printers, copiers and fax, Metropolitan City of Rome Capital, Italy
- Tender 10: Supply of hygiene products, Metropolitan City of Rome Capital, Italy
- Tender 11: Supply of solar protection mechanisms, Metropolitan City of Rome Capital, Italy
- Tender 12: Electronic invoice service, OesteCIM, Portugal
- Tender 13: Business travel services, CONSIP, Italy
- Tender 14: Energy efficient transformers, HEP Ltd., Croatia



Energy- and CO₂-savings and results per tender

Tender 1 (Video interpretation services):

- Energy savings: **1,798 TOE**
- CO₂-savings: **555 t CO₂e**
- Benchmark: Conventional interpretation services

Tender 2 (Supply of poultry meat with 10 % from organic farming):

- Energy savings: **155 TOE**
- CO₂-savings: **446 t CO₂e**
- Benchmark: 100 % poultry meat from conventional farming

Tender 3 (Supply of dairy products with 15 % from organic farming):

- Energy savings: **1,535 TOE**
- CO₂-savings: **4,406 t CO₂e**
- Benchmark: 100 % dairy products from conventional farming

Tender 4 (Purchase of recycled LDPE-bags):

- Energy savings: **26 TOE**
- CO₂-savings: **57 t CO₂e**
- Benchmark: Purchase of non-recycled LDPE-bags

Tender 5 (Printing and supply of printed matter I):

- Energy savings: **2 TOE**
- CO₂-savings: **11 t CO₂e**
- Benchmark: Printed matter from primary fibres

Tender 6 (Printing and supply of printed matter II):

- Energy savings: **0.4 TOE**
- CO₂-savings: **1.6 t CO₂e**
- Benchmark: Printed matter from primary fibres

Tender 7 (Purchase of printed materials):

- Energy savings: **0.1 TOE**
- CO₂-savings: **0.4 t CO₂e**
- Benchmark: Printed material from primary fibres

Tender 8 (Purchase of paper reams):



- Energy savings: **53 TOE**
- CO₂-savings: **210 t CO₂e**
- Benchmark: Paper reams from primary fibres

Tender 9 (Supply of recycled toner cartridges):

- Energy savings: **0.1 TOE**
- CO₂-savings: **0.4 t CO₂e**
- Benchmark: non-recycled toner cartridges

Tender 10 (Supply of hygiene products):

- Energy savings: **0.5 TOE**
- CO₂-savings: **2.3 t CO₂e**
- Benchmark: Conventional hygiene products

Tender 11 (Supply of solar protection mechanisms):

- Energy savings: **108 TOE**
- CO₂-savings: **555 t CO₂e**
- Benchmark: Without solar protection

Tender 12 (Electronic invoice service):

- Energy savings: **7 TOE**
- CO₂-savings: **9 t CO₂e**
- Benchmark: conventional invoice

Tender 13 (Business travel service):

- Energy savings: **2,130 TOE**
- CO₂-savings: **9,618 t CO₂e**
- Benchmark: previous situation

Tender 14 (Energy efficient transformers):

- Energy savings: **0 TOE**
- CO₂-savings: **9,561 t CO₂e**
- Benchmark: previous situation

The savings of GHG and energy that each of the 14 tenders offer, are shown in the figure below. It can be seen that the tenders for video interpretation services, the tenders for poultry meat and dairy products, the tender for business travel services and the tender for energy efficient transformers offers higher savings of GHG.

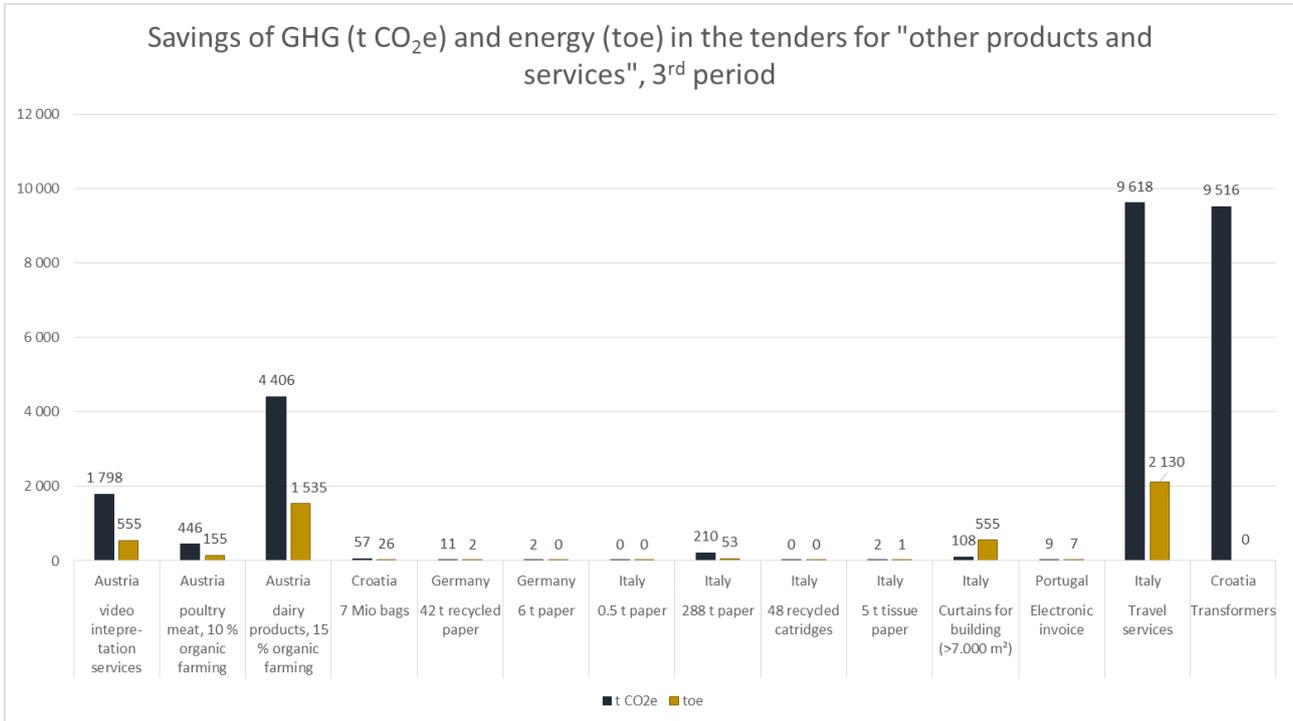


Fig. 10: Savings of GHG and energy in the tenders for "other products and services"



4 Training and capacity building

Four Train-the-Trainer-(TtT) and **39** Train-the-Procurer-seminars (TtP) have been conducted in the 3rd period. This is a total of **43 seminars**. In the table below, you'll find the number of seminars conducted in each country in the 3rd period.

Tab. 1: Number of Train-the-Trainer- (TtT) and Train-the-Procurer-seminars (TtP) conducted in the 3rd period.

	Austria	Croatia	Germany	Italy	Nether-lands	Portugal	Slovenia	Spain
Number of TtT in 3 rd period	1	0	0	1	1	1	0	0
Number of TtP in 3 rd period	1	3	25	1	6	2	1	0

Seminars for trainers

59 participants (trainers) took part in the four Train-the-Trainer-seminars. The average assessment of the participants on a 6-stage scale⁷ of “training objectives fully achieved” was “Very Good” in one training and “Good” in three trainings.

Some of the problems and corrective measures described by the national support partners who organised the trainings were:

- One of the main problems that already began to show in the trainings of the first period, is the large variety in the level of knowledge of the trainees. Usually the trainings for public procurers are offered by diverse organisations. They range for example from organisations that offer consultancy or trainings in the product group “food” to the chefs of canteens to organisations like energy agencies that offer consultancy or trainings mainly to mayors in the product group energy. This diversity in needs and knowledge makes a training very challenging. The National Support Partners developed solutions. The Dutch NSP for example, intensified the cooperation with the different organisations that offer support to be able to offer a better tailored assistance.
- Because participants from earlier trainings asked for more practical examples and exercises, more exercises and examples from GPP2020 were included.
- Not all participants of the trainings could detect an immediate demand for GPP training, i.e. the possibility of putting into practice what they learned.

⁷ From very poor, poor, so-so, quite good, good, very good.



Follow-up of seminars for trainers

12 TtT seminars were followed-up. The results of this follows-up are shown in the table below.

Tab. 2: Overview of the results from the follow-ups of Train-the-Trainer-seminars (TtT) conducted in the third period.

	Austria	Croatia	Germany	Italy	Nether-lands	Portugal	Slovenia	Spain
Number of follow up on TtT seminars	1	2	3	2	1	2	0	1
Trainees followed up	5	32	33	32		43		13
Response rate	56 % (5)	93 % (30)	21 % (7)	6 % (2)		40 % (17)		100 % (13)
Trainees that have provided GPP/LCPP training	20 % Yes	57 % Yes	86 % Yes	0 % Yes		94 % Yes		8 % Yes
Trainings conducted by trainees	1	7	≥ 3	0		12		3
Practitioners trained	n.a.	23	≥ 15	0		131		40

The results of the follow-ups are very diverse. First, the response rates go from 6 to 100 %. It seems that some National Support Partner have a more intensive cooperation with trainers and their organisations. Secondly, the amount of trainers from the TtT-seminars that provided GPP training with training material from the TtT-seminar was different – it ranges von 0-94 %. In those cases where participants conducted trainings with material from the GPP2020-trainings, the following material was used:

- Selection of award criteria and assessment of bids with the help of award matrixes
- Good-Practice Examples or case studies
- GPP2020 calculators
- Material of greening tenders
- LCC analysis
- New EU directives
- Training techniques: SWOT analysis and mapping of Environmental Problems



Seminars for procurers

In the 39 Train-the-Procurer-seminars, 605 procurers were reached. In the majority of cases, the average assessment of the participants about “training objectives fully achieved” was “good”, in some cases, it was “very good”.

Some of the problems and corrective measures described by the national support partners who organised the trainings were:

- Very different levels of GPP knowledge and very different level of experience. This is the same problem as in the TtT-trainings. Because it already occurred in the trainings before, some NSP looked for solutions. They contacted the participants before to tailor the training according to the existing knowledge. Some started to better define the minimum requirements for those who are allowed to participate in the training.
- Different levels of interest. This problem can be solved with flexibility. If a topic pops up in the group of participants, there should always be enough room to talk about this topic.
- Important topics for the trainings are prices and costs for green and conventional solutions and how to convince the management to start GPP.

Follow-up of seminars for procurers

37 TtP seminars were followed-up. 178 procurers answered the questions. The results of these follows-ups are shown in the table below.

Tab. 3: Overview of the results from the follow-ups of Train-the-Procurer-seminars (TtP) conducted in the third period.

	Austria	Croatia	Germany	Italy	Nether-lands	Portugal	Slovenia	Spain
Number of follow up on TtP seminars	2	5	14	5	1	3	3	4
Trainees followed up	12	100	193	123	6	43	42	70
Response rate	33 % (4)	79 % (79)	n. a.	7 % (8)	60 % (6)	60 % (26)	69 % (29)	39 % (27)
Trainees that greened tenders	100 % Yes	75 % Yes	n. a.	50 % Yes	100 % Yes	46 % Yes	90 % Yes	19 % Yes
Tenders were GPP criteria was included	2*	16	n. a.	10	n. a.	6	11	42

*Some trainees that answered the follow up worked in the same organisation and referred to the same tenders.

The results of the follow-ups of TtP-seminars are diverse. The response rates range from 7-79 %, the amount of trainees that greened tenders range from 19-100 %. The diversity of results can probably be explained with the degree of cooperation between National Support Partners and



procurers, with the method of collecting data and with the time between the trainings and the follow-ups.

At least 87 tenders were greened thanks to the GPP2020 TtP-trainings. These tenders belong to the following products groups:

- Cleaning services and products
- Events and exhibitions
- Vehicles and transportation services
- Energy
- Catering and food
- IT-appliances
- Paper and printing and office material
- Furniture
- Maintenance service
- Machinery
- Lighting
- HVAC-systems
- Works including infrastructure
- Vending services

The following content from the trainings were useful to the trainees:

- GPP 2020-Calculators
- GPP Tender Models
- Criteria development and green criteria
- System of certification of eco-labelled products
- Experiences from other procurers
- Information about environmental impact
- EU GPP policy
- To rethink the needs linked to procurement
- Legal aspects when to define environmental criteria
- The resources for greening tenders and its inclusion in the procurement documents



5 Support activities

Each National Support Partner (NSP) identified a set of support activities that were most useful in the specific context the NSP was working in. Below, you'll find some of the activities that were conducted in the different activity-groups. For more information, please go to the national monitoring reports for the 3rd period.

I. Information sources

As information sources, several National Support Partners like Umanotera (Slovenia), Ecoinstitut (Spain), KNB (Germany), UNEP (Croatia) and IFZ (Austria) managed their GPP-websites.

Portugal finalised its book and a training package about SPP.

For the NSP from the Netherlands (RVO), personal communication with intermediary organisations has been the most important vehicle for dissemination of GPP 2020 knowledge. This included representation at events and the use of the information channels of intermediary organisations.

II. Help Desk

Except from those NSP that already managed a Help Desk (like Austria and the Netherlands), the NSP promoted their Help Desks via email, website, specific communications at training and dissemination events, managed their Help Desks and answered inquiries (for example they helped to green tenders).

Problem encountered:

Umanotera, the NSP from Slovenia, made the experience that on the one hand, the procurers delivered many comments, suggestions and proposals during events and trainings, but on the other, they have not demonstrated much interest in using the Help Desk.

III. Regular GPP Dissemination Events *(including the mandatory national networking meetings)*

In the third period, the NSP organised a number of dissemination events:

- Networking event during the “Road Authorities meet Road Authorities” (01.10.2015, the Netherlands).
- Hot topic table about GPP 2020 and the calculation of savings at the conference Ecovation (01.10.2015, Graz, Austria).



- Workshop on Circular Procurement together with the Ministry of Environment (11.04.2016, Vienna, Austria).
- Two networking events with 48 and 39 participants in Catalonia/Spain (11.06.2015 and 03.03.2016).
- Conference “E-mobility” organised by KNB (Germany).
- Conference “mobile energy” organised by KNB (Germany).
- Event with round tables and discussions between procurers and decision makers in Croatia.
- National event in Slovenia on 12.04.2016
- During the conference organized at the Department of Firefighters from the Ministry of Interior (25.06.15, Roma, Italy), the services offered by the national support structure and by the GPP2020 project, were presented to participants.
- During the Forum CompraVerde-BuyGreen 2015, project activities were promoted to the purchasing managers of various administrations. A desk was set up to provide information about the project and a dedicated session to GPP2020 working groups was organised.
- Caldas da Rainha: The 19 participants focused on the procurers risk perception in low carbon procurement and how to overcome the barriers (29.09.2015).
- Porto: The participants of the networking event focused on the procurers risk perception in low carbon tenders (28.10.2015).

IV. Community of Practice, platform for exchange of best practices

Next to the national networking meetings, the NSPs organised other meetings and discussions, for example:

- The Dutch NSP, RVO, supported the organisation of four working sessions and two specific seminars on sewage systems and concrete by the Community of Practice.
- The Slovenian partner, Umanotera, informed all ministries with resulted proposals and recommendations.
- Two study visits to the RES lab at the University of Split and to the PV plan at the University of Rijeka.
- Support of the extension and the increased visibility of the Procura+ network.
- Meeting with responsible authorities from the GreenS-project.



Success case:

The Community of Practice managed by the Dutch NSP is a valuable vehicle to learn and speed up the process of sustainable procurement. Several municipalities took measures to incorporate CO₂ neutral procurement in their daily operating processes. This will lead to a bigger reduction of the emission of greenhouse gases in the future.

V. Training Events

See chapter 4, “Training and capacity building” for more information about the trainings events carried out in the 3rd period. We want to highlight that the German KNB offered a considerable number of trainings.

Success case:

Procurers are not used to ask for help in developing tenders documents, so the use of the same documents from the last tender is usual, as well as the use of lower price criteria. In order to break this approach it is necessary to involve them in training actions first in order to get their confidence on the procedure of including low carbon criteria.

Their perception is that the introduction of low carbon criteria in tenders will increase the risk of an unsuccessful tender, as they do not know the market well. The development of a confidence environment between procurers and the NSP is very important to base on the introduction of low carbon criteria in tenders.

VI. Green tender database

The NSPs decided to develop Tender Models not only for the tenders developed in WP2 but also most of the additional tenders from WP4. Thus, we have now 108 tender models available on the GPP 2020 Website. Because most of the tenders are not only in english but also in the language of the tenderer, there are now Green tender databases in eight languages on the GPP 2020 website.

VII. Support of key products/services groups

All NSP offered low-carbon-tender assistance to organisations at least for the additional GPP 2020 tenders.



VIII. Market Analysis

A market analysis was performed by UNEO, Croatia, for the products electricity, street lighting and ICT and by Ecoinstitut, Catalonia/Spain. Ecoinstitut offered information on repositories of sustainable products and services on the website. It includes repositories on:

- Ecolabeled products (with the Catalan Ecolabel or the European Union Ecolabel).
- Energy efficient products, technologies and services (on vehicles, building equipment, energy service companies, etc.)
- Organisations with EMAS.
- Social and Fair Trade organisations.

IX. Provision of support on monitoring and evaluation of GPP practices

Support was provided for example to the region Veneto for the development of its Regional Action Plan on Green Public Procurement. The Plan was approved with Regional Act 1866 of 23 December 2015 and includes actions and objectives to be realised from 2016 to 2018.



6 Conclusions

In connection to the low-carbon-tenders and the trainings, the following targets were (partially) reached:

a) Low-carbon-tenders

- The target is 112 low-carbon-tenders (64 by the Purchasing Bodies and 48 by others).
At the end of the 3rd period, **113 low-carbon-tenders** were implemented by the Purchasing Bodies and by other public authorities.
- These 113 tenders let to a reduction of Greenhouse Gas Emissions of **922,931 t CO₂eq**:
 - **67,795 t CO₂e** (1st period)
 - **120,151 t CO₂e** (2nd period)
 - **734,985 t CO₂e** (3rd period)
- They also let to an energy reduction of **147,076 TOE**:
 - **11,927 TOE** (1st period)
 - **11,131 TOE** (2nd period)
 - **124,019 TOE** (3rd period)
- The amount of renewable energy triggered is **108,760 TOE**:
 - **3,807 TOE** (1st period)
 - **21,504 TOE** (2nd period)
 - **83,449 TOE** (3rd period)

These figures show that the 3rd period was the most active period when it comes to the evaluation of low-carbon-tenders and the development of tender models.

b) Trainings

- The target is 13 train-the-trainer-seminars with at least 130 trainees.
At the end of the 3rd period, 13 TtT-trainings have taken place with 211 participants.
- The target is 36 train-the-procurer-seminars with at least 540 procurers.
At the end of the 3rd period, 63 TtP-trainings with 1,020 procurers have taken place.
- The target is that the GPP criteria have to be applied by at least 75% of trainees within one year of the training. Besides, at least, 12 GPP-tenders have to be implemented in each country. Due to the low response rate (no response: 57% T-t-P and 44% T-t-T seminars),



we don't know if participants have greened their tenders or conducted trainings after the GPP2020 seminars. Nevertheless, from those that responded "YES" we can say that more than 80 tenders were greened by trained procurers and that trainings on GPP were organised after the GPP2020 seminars using some of the material provided by the project. As mentioned by Croatia, "for most of the attendees it was a first touch with the green public procurement" so we cannot expect them to green a tender right after the training.

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