

# EURACTIV

## EURO 2021 FOOTBALL CUP: THE GREEN ISSUE

SPECIAL REPORT | DATE

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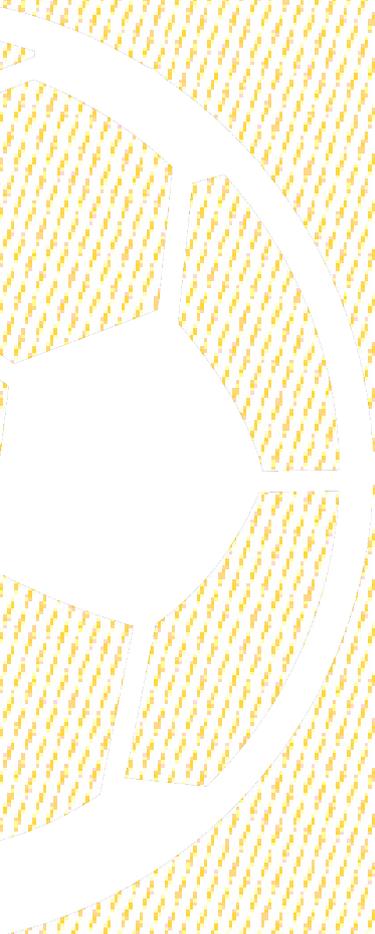
# EURO 2021 FOOTBALL CUP: THE GREEN ISSUE

SPECIAL REPORT

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*The 16th edition of the European football cup starts in June with a one-year delay due to the COVID-19 crisis. With growing attention being paid to the climate impact of spectator sports, EURACTIV looks into how green this edition will be.*





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# Will this year's Euro cup have lessons for football's climate impacts?

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By Dave Keating | EURACTIV.com



The official UEFA EURO 2020 mascot Skillzy (C) and former French player David Trezeguet (L) pose with the UEFA EURO trophy at Football park in St. Petersburg, Russia, 22 May 2021. St. Petersburg is one of the host cities of the UEFA EURO 2020, which was postponed one year due to the ongoing coronavirus COVID-19 pandemic. [EPA-EFE/ANATOLY MALTSEV]

There are many things that football stadiums can do to reduce their environmental impact. But in an international tournament system, reducing emissions is inevitably difficult.

The 16th edition of the UEFA European Championship is set to be a tournament like none other before it. Euro 2020 was postponed – during a year in which the pandemic constrained sporting events across the world – but the contest is going ahead in June with limited audience capacity.

And just to add to the strangeness of this particular edition, this year it will take place across 11 European countries instead of the usual one or two. That initiative was taken before the pandemic by then UEFA chief Michel Platini, who defended it as a “romantic” one-off event to celebrate the 60th anniversary of the competition.

But at the same time, this year's tournament is coming as more and more attention is being paid to the climate impact of spectator sports. [The EU has set a goal of reducing emissions](#)

[by 55% by 2020 and to net zero by 2050](#). Each sector is being asked to do its part to help get to this goal.

And some are questioning whether holding a tournament across 11 countries is in keeping with that green ideal. Tournaments are already rough on the climate because of the large energy usage of stadiums, and adding extra travel to the mix can only add to the emissions, critics say.

A big stadium consumes about 10,000 megawatt-hours (MWh) of electricity per year, and up to 25,000

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KWh during a 90-minute match. The energy used during just one match could power a dozen homes for an entire year.

Lighting alone accounts for almost 40% of total energy used during a match, according to the consumer consultancy Selectra. That isn't just about lighting the pitch evenly, it's also for scoreboards, monitors and advertising screens. Catering accounts for about 20%, as does heating and cooling. The powerful satellite transmitters and HD cameras needed for broadcasting the games account for about 11%.

"It is estimated your average World Cup stadium could power a small town without breaking a sweat, from kick off until the final whistle," Selectra concludes.

And that's just part of a football tournament's overall carbon footprint. The 2018 World Cup in Russia is estimated to have produced 2.2 million tonnes of CO<sub>2</sub> equivalent – comparable to the emissions from producing a half pint of beer for every person on the planet – says Charlie Rogers, a consultant with the environmental consultancy Small World.

"The biggest percentage was transport – that was 74% of the total carbon footprint of the fans and teams." Accommodation made up 12%, food and beverage 5%, temporary facility construction 4%, and merchandise production 3%.

Given that transport is the biggest contributor to a football tournament's emissions, this year's EURO2020 offers the promise of a cleaner cup because there will be much fewer people travelling abroad to attend

matches.

But at the same time, the new idea to have the tournament spread out over 11 countries rather than one or two could set a dangerous precedent. If teams and fans were to travel all over Europe for the next tournament after the pandemic, it could majorly increase the tournament's emissions.

## GROWING PRESSURE

Such a development would be going against the grain of public opinion. There are a growing number of fan initiatives trying to make football greener.

In Germany, an initiative called "[Unser Fußball](#)" (Our Football) has been launched to promote fair competition as well as greater social and environmental responsibility for football clubs. It has already been signed by almost 3,000 fan clubs representing a total of around half a million fans.

"There is a broad fan base that is calling for a change in values in football," says Manuel Gaber, a spokesperson for the initiative. But "surprisingly little has happened on the part of clubs and associations."

In France, football clubs are also under increasing pressure. French Green MEP Karima Delli, who chairs the European Parliament's transport committee, lashed out at football clubs last year for their excessive travel.

"If climate change is an issue for everyone, it should be too for the world of football," she told EURACTIV.

She was particularly enraged when she heard the Lyon football club

travelled to Paris by plane when the same journey would take two hours by train. She also attacked Paris Saint-Germain for flying to Dijon, which is only one hour and a half away from Paris by train. To make things worse, the club's bus drove all the way to Dijon empty in order to welcome the players at the airport.

Could these teams limit themselves to public transport? "When you're thinking about the future of tournaments, if you could do it all by public transport links that would make a big difference," says Rogers. "That's easier for a lower division team than for an international team. But even if they could just fly commercially instead of by minijet, or if they could make half their travel in a season by public transport, it would send a clear message and reduce their overall carbon footprint."

"There are huge challenges when you have an international fan base and an international competition, because it's extravagant," she adds. "You're not going to be able to remove all of the energy consumption issues from a massive event like that. But one of the biggest impacts is not the actual energy use of the tournament itself, it's influencing the millions of people that are going to be watching. You have so many eyes watching, and if they have an opportunity to change so many people's habits."

But are football fans keen to change their ways to lower their climate impact? The data suggests they're not – yet. The [Life Tackle](#) project, an international project spearheaded by the EU, with which EURACTIV is involved, is seeking to disseminate best environmental practice in football, and it's been looking at the issue of fan action.

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A [study](#) carried out by Sant'Anna School of Advanced Studies in Pisa as part of Life Tackle last year found that while the majority of football fans are aware of the importance of protecting the environment, they've done little to change their own behaviour as football fans in order to do so.

Two-thirds of those surveyed said they always use a car to get to stadiums. The respondents were largely unaware of the environmental impact of football. For instance they could not identify stadium lighting, water irrigation and transportation as the biggest emissions producers of football. And half said they believe changing their individual behaviour would not do anything.

"We observed that the fans mostly just see the impacts that they see during the match," says Professor Tiberio Daddi, the scientific coordinator of the project. "They mentioned waste, because they know after the match they see between the seats a lot of waste on the floor. But they're not fully aware of the relevance of transport of supporters, because for them it's not something they think is linked with the match. But with the carbon footprint study we have carried out, mobility is a very huge impact compared to other environmental aspects. They also didn't know some hidden consumption that can be linked with the management of the stadium, they just attend the match but don't see the management."

The results show a clear misalignment between the real impacts of football matches and the perception of the fans, he says. But

could clubs and stadium managers do more to make their role in the transformation of football more visible?

### STADIUM ACTIONS

There's clearly a lot that can be done. As already mentioned, stadiums are big users of energy. The amount of electricity they consume depends on a lot of things: the weather, the time of year, the stadium's age, and size, and whether it has a dome, for example.

Perhaps the biggest thing that can determine a stadium's climate impact is whether its able to generate any of its own electricity. The most important consideration, however, is how often the stadium is used, and what it's used for.

"These aren't just stadiums, they're buildings as well," says Jed Cohen, a senior expert and project leader at Energy Institute who is involved with the EU-funded Greenfoot program, which is helping stadiums go green. Many football stadiums also include offices for the football clubs or national leagues. "Their use profile varies a lot. In one day they can be using a ton of energy with 80,000 people there. But 90% of the year you have 40 people in the office."

When it comes to energy, the big users aren't actually the most obvious elements that fans see. "Energy consumption isn't only coming from the lighting of the pitch, but also from techniques that a lot of pitches have in order to stimulate the growth of the grass," notes Daddi. "For instance, they use some lamps in the winter

period to stimulate photosynthesis when there's low sunlight. This is a very big impact, something like 30% of the total according to our estimation. And of course the supporters are unaware of this."

This is where local weather conditions can have a big impact. A stadium in Rome or Baku doesn't need these special methods to grow grass, and don't need to heat the seats. The Life Tackle project is currently conducting a lifecycle assessment to see whether stadiums in Northern countries could do better by the climate by buying natural grass from warmer places and bringing it in with trucks, or using these artificial stimulation methods.

In this special report we will look at how stadiums can reduce their environmental impact by looking at three venues for the upcoming Euro 2020 tournament: Baku's Olympic Stadium, London's Wembley Arena, and Munich's Allianz Arena. In a year where so many football plans are desperate for a return to normality, perhaps there are ways to get to a 'new normal' with football that isn't so tough on the environment.

## INTERVIEW

# UEFA director: ‘It is important for us to show leadership in greening football’

By Dave Keating | EURACTIV.com



Michele Uva is UEFA's Director for Football Social Responsibility.  
[@UEFA / Twitter]

**E**ven with its unique pan-European nature and reductions in fan travel due to the pandemic, Euro 2020 would have been the most environmentally conscious Euro tournament yet, says Michele Uva. And Euro 2024 in Germany will be “the most sustainable tournament ever,” he assures.

*This year's unconventional Euro*

*2020 cup has brought renewed attention to the environmental impacts of football. Michele Uva, UEFA's Director for Football Social Responsibility, told EURACTIV what they're doing to reduce football's environmental footprint.*

***The climate and environmental impacts of sports venues is an area that's getting increasing attention. What are football stadiums and leagues doing to***

***lower their environmental impact?***

Europe is home to some of the leading sports stadiums in the world in terms of environmental impact and UEFA, together with the European football community, is committed to being at the forefront of this. From renewable energy to smart mobility and innovative recycling and waste management systems, stadiums,

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clubs, fans and communities are all engaged in ensuring optimal sustainability.

The challenges and possibilities for reducing environmental impact vary greatly from stadium to stadium, from city to city and countries across Europe. That's why one of the key things we can do at European level is to make sure we learn from each other and exchange best practices.

In this context, UEFA and several of its member associations, along with leading stadiums and clubs – including Rome's Stadio Olimpico which will host the opening game of the EURO this summer – are excited to be a part of the LIFE TACKLE project. LIFE TACKLE is an international project co-funded by the EU aiming at improving the environmental management of football matches and the overall level of awareness and attention towards environmental issues in the football sector.

Between 2018 and 2021, best practices on environmental management are being collected and tested in different stadiums across Europe and information exchanged among national football associations to guide their implementation. As part of the project, strong contacts with EURO 2020 host cities has been maintained to share with them the LIFE TACKLE results and help them better manage waste during the European Championship."

**What are some of the initiatives stadiums and clubs are envisioning for the future that could lessen the environmental impact of sporting events?**

From fans, to clubs, leagues,

players and national associations, we are seeing more and more members of the European football community becoming engaged in and taking leadership on climate action and environmental protection. There are so many stadiums and clubs doing great things – whether those at elite European level or at grassroots and community levels.

From an elite side, VfL Wolfsburg from Germany's Bundesliga are a great example of an environmentally sustainable club – implementing 100% green energy across the club, using bioplastic cups and ensuring zero landfill waste. At a community and grassroots level, Forest Green Rovers from England have introduced many sustainability measures, including solar panels, electric car charging points, water recycling, an electric lawnmower, an organic pitch, and an entirely vegan menu for players and fans.

Communities and fans are really at the heart of what stadiums and clubs are doing and are being challenged to do. We can highlight here another really interesting EU project that UEFA is involved in with three UEFA national associations – GREENFOOT. It's an excellent example of innovative, fan and community mobilisation-based action. The GREENFOOT project concept is to finance sport building energy efficiency renovations and renewable energy source installations with crowdfunding schemes that propel Europeans to become active participants in the energy transition through their love of sports and their favourite teams.

Overall, as the European governing body, for UEFA, it is important for us to show leadership,

support coherence and to help enable solutions and best practices to be scaled, with everyone doing what they can in their specific circumstances. We also believe strongly in partnering with international organisations and governments, in particular the EU's climate action agenda and UN SDGs.

That is why the UEFA President committed European football's support to the European Green Deal and European Climate Pact last year when meeting European Commission President von der Leyen and Executive Vice President Timmermans. We are also signed up to the UN Sport for Climate Action Framework, which is a framework that an increasing number of leading European football clubs are part of.

***This edition of the euro football cup is special, because it is the first which is not hosted by a single nation (or group of two). At the same time, it is happening in the context of COVID-19, where there will be limited audience size and travelling. With both of those differences in mind, will this year's event have less of a climate impact than normal years?***

UEFA EURO 2020 is a celebration of European football that will happen right across the continent. The nature of the tournament means there are many benefits over a traditional one. In addition to being able to take the matches to more diverse communities across Europe, there is no need either to build a host of new stadia or the transport links that they require, which carry a huge environmental impact from, for instance, materials and other resources used for the development of such infrastructure.

But it also has a cost, with increased

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travel for fans to watch their teams play. Whilst this is of course reduced due to the pandemic meaning less fans will travel, UEFA had in any case always been committed to compensating for the carbon emissions for all staff, teams and supporters travelling to this event. Even with its unique pan-European nature and even without the reductions in fan travel due to the pandemic, EURO 2020 would always have been the most environmentally conscious EURO tournament yet.

And we are not stopping here – for EURO 2024 in Germany we are working with the German Football Association to make the 2024 tournament the most sustainable tournament ever. It is our shared objective to make UEFA EURO 2024 a new flagship project in terms of event social responsibility, as well as a source of inspiration for the integration of sustainability into the core of football and other sports.

UEFA is fully committed to ensuring that the European Championship is always a driving force for sustainable development in both environmental and social sustainability terms, just like Europe itself aspires to be.

### ***What can fans do to help lower their environmental impact when they travel to stadiums for tournaments ?***

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There are two main areas where fans can – and already do – play a key role in helping to reduce their environmental impact when they come to games. The first relates to smart mobility – wherever possible fans should choose ground transport over air travel and use public transport to reach the venue or walk or cycle.

The second is around sustainable

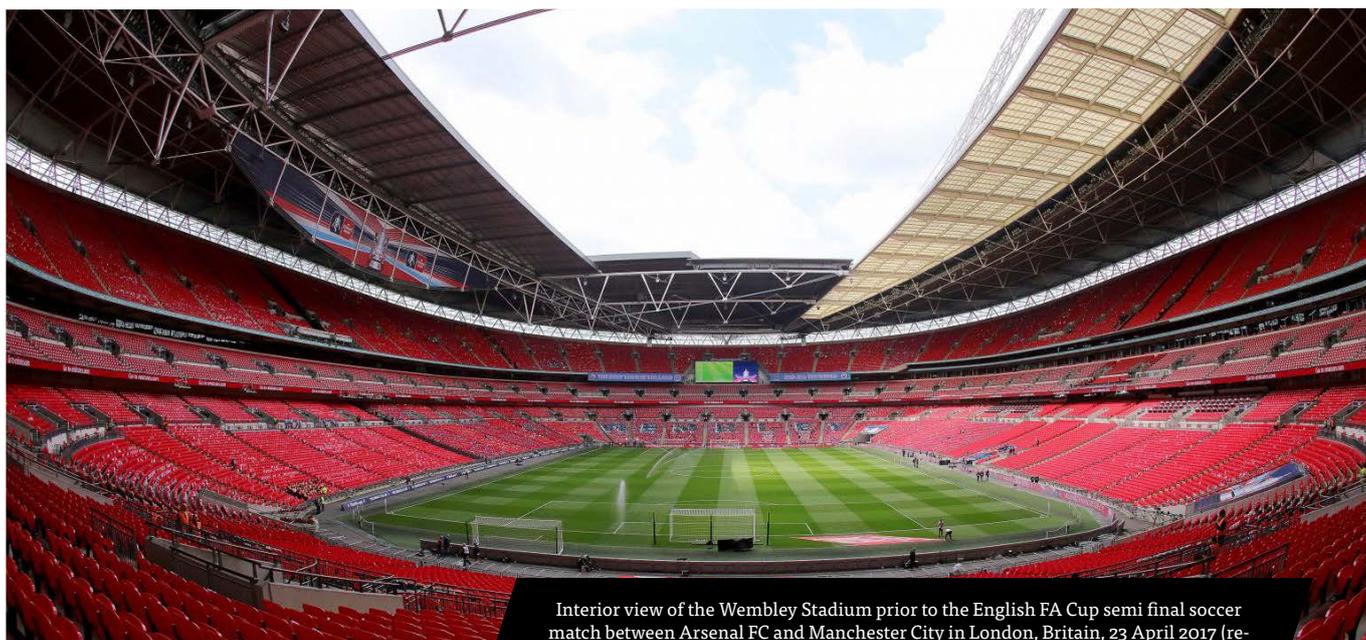
consumption and circular economy, where fans have a key role to play in ensuring that they support recycling and waste management (i.e. separate collection of plastic) efforts in and around the stadium.

There are many more ways and fans themselves are often leading calls for new approaches like for example vegetarian menu options.

Above all, to have an impact and successful initiatives, it's about working together and good communication between all stakeholders from event organisers, stadiums, suppliers, to local councils and authorities, clubs, fans and even sponsors. We all have a role to play and responsibility, and together we can really make a difference.

# Wembley Arena: an old stadium with a new, green vision

By Dave Keating | EURACTIV.com



Interior view of the Wembley Stadium prior to the English FA Cup semi final soccer match between Arsenal FC and Manchester City in London, Britain, 23 April 2017 (re-issued on 17 March 2020). [EPA-EFE/DOMENIC AQUILINA]

**W**embley is one of the older arenas hosting Euro 2020 matches. Can a legacy venue reduce its environmental impact as well as a newer one?

When it comes to legacy stadiums, it doesn't get more storied than London's Wembley Arena. Opened as the Empire Pool in 1934 for the British Empire Games, 90 years later it is perhaps the UK's most famous venue for sports and concerts. In the late 70s it was granted protected status and renamed Wembley, the area of London where it's located.

The down side of that legendary status, of course, is that the building

isn't as energy efficient as newer stadiums. Nevertheless, the arena has made big strides in improving its environmental performance. In 2019 it was awarded the ISO 20121 certificate, the highest international standard of sustainability in events, and was recertified in 2020.

This in large part recognised the work done by the English Football Association, which runs the stadium. The FA developed an Event Sustainability Management System, headed by Sarah Smith, in 2018.

The sustainability team "continually works to improve the environmental impact areas

considered most significant for events at Wembley Stadium – energy and climate action, waste, plastic use, water, food and transport," Smith says. "To name a few of our many achievements in these areas over the years, we've been zero waste to landfill since 2010, we've installed water fountains across the stadium, increased vegetarian and vegan meal options, installed EV charging points outside the stadium, and switched to reusable cups for beer delivery."

As for the energy impacts, Smith says it depends on the type of event. "They vary in duration and often have very different requirements for pre and post event set up, meaning some

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will use less energy than others,” she tells EURACTIV. “However, this also gives us a huge opportunity – in 2019 we switched to 100% renewable electricity and upgraded the floodlights to LED, reducing energy consumption by around 40%. We continue to roll out LED lighting across the building and identify and implement energy saving initiatives.”

This year, Wembley has been chosen as one of the 11 hosting stadiums for the Euro 2020 football tournament which was delayed to June this year as a result of the pandemic. That has put it in the spotlight as people look at the climate implications of this year’s unusual event – lower fan attendance because of COVID but more team travel because the usual one or two host countries have been expanded to eleven.

“Due to COVID-19 regulations, at the moment the stadium will be operating at a reduced capacity for the safety of everyone at the event,” says Smith. “As the majority of the environmental impact of our events comes from areas such as transport, food consumption, waste and energy, naturally, with less people travelling to and using the stadium, our impact across these areas will be reduced. However, this doesn’t mean that we won’t continue to address our environmental impact.”

### EXAMPLES FROM SMALLER, NEWER STADIUMS

The unavoidable reality, however, is that a big stadium hosting international football has limits to what it can achieve. But there are certainly lessons to be learned from some of the UK’s smaller clubs. On example are the Forest Green Rovers,

an association football club based in Nailsworth, England.

The Rovers, who compete in the fourth tier of English football, have transformed into a green football club under the management of Dale Vince. It became the world’s first vegan football club in 2015, and a new lawn was installed with a number of eco-friendly innovations.

“They’ve recently designed a new stadium that’s being built designed with sustainability in line,” says Charlie Rogers, a consultant with the environmental consultancy Small World. “It’s made of sustainable materials like wood, and has renewable energy sources built into the site. They also use public transport to travel to their matches, use only locally sourced food and put out environmental messages to their fans.”

Such measures are right now not envisioned for a big stadium like Wembley or a big international tournament like Euro 2020. Rogers says some of the measures being taken by the Forest Green Rovers have lessons for the higher leagues, and some don’t.

“It’s so different being a team in a lower division in the UK compared to an international team,” she says. “That of course brings huge problems to the carbon footprint. A lot of teams will be playing in their respective countries regularly, and not flying internationally all the time. Even if they can fly commercial instead of mini jet.”

“There are huge challenges when you have an international fan base and an international competition, because it’s extravagant,” she adds. “You’re not going to be able to remove all of the energy consumption issues

from a massive event like that. But one of the biggest impacts is not the actual energy use of the tournament itself, it’s influencing the millions of people that are going to be watching. You have so many eyes watching, and if they have an opportunity to change so many people’s habits.”

### FUTURE PLANS

Smith says Wembley has a lot of plans for further efforts to go green, and one area is in communication with fans. “A key aspect of maintaining ISO 20121 and our management system is continual improvement,” she says.

“General awareness around the impact of football on climate change has increased over the last few years – we know that football can negatively impact the environment and we also know that a poor environment can negatively impact the game. However, we also know that football has the power to create lasting positive change and there are some really exciting things happening across venues in the UK and globally.”

One example, she says, is the rise of sporting organisations like FA committing to the UNFCCC Sports for Climate Action Framework and positioning the sector on a path towards a low carbon economy.

Euro 2020 may also provide lessons on how reduced audience capacity affects energy use and general environmental impact. Of course, any stadium will naturally want to make sure all seats are filled once the pandemic is over. But if some of the reduced environmental impacts evident during this unusual tournament could be replicated even at full capacity, it could provide some interesting lessons for how to make football greener.

# Baku Olympic Stadium: newer can mean greener

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By Dave Keating | EURACTIV.com



Baku's 225,000-square-metre Olympic Stadium, which will be one of the host sites for this year's Euro 2020 football tournament, was built just six years ago, ahead of the 2015 European Games. [Photographer RM / Shutterstock]

**A**zerbaijan's host site for the Euro 2020 football cup was built for an Olympic Games that never was. Now it's preparing for the biggest event it's hosted so far.

When it comes to energy consumption, a stadium's age and location can make a big difference.

Baku's 225,000-square-metre Olympic Stadium, which will be one of the host sites for this year's Euro 2020 football tournament, was built just six years ago, ahead of the 2015 European Games. Its name was meant to give Azerbaijan a leg up in its bid to host the 2020 summer Olympics, though the government is probably quite relieved now that they eventually didn't win that bid.

Since then the stadium has hosted

several large-scale sporting events such as the 4th Islamic Games in 2017 and the UEFA Europa League Final in 2019.

But this year's Euro 2020 will be the biggest event yet that the stadium has hosted. "Baku Olympic Stadium has never welcomed so many people during one event, where there is less than a week between the match days," says Javid Garayev, the director of the stadium. "So, for sure this will affect the number of employees, cleaning and waste management operations at the stadium."

A massively bigger event might ordinarily mean a massively bigger climate impact. But this year will be quite different because of the COVID-19 pandemic. The stadium will be at only 50% capacity, welcoming around

35,000 fans.

"After the stagnation period of the world events during the pandemic, this is a big happiness to see the spectators coming back to the venue to support their favorite teams and watch their favorite game – football not from the TVs but from the tribunes," says Garayev. "The main complexity of Euro 2020 is to keep the balance between COVID-19 measures and the real fan atmosphere which we aim to create organising four matches at the venue."

In terms of energy use, having the stadium at 50% capacity won't make that much difference, Garayev says. "From the perspective of venue operations, we use the whole stadium's bowl, we are on fully operational mode and all climate and environmental

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impact is actually regulated by the venue not depending on how many people will attend the event," he says.

"There can be less impact on behalf of the waste amount," he adds, "but this reality will not change the overall potential waste amount, because all equipment of the stadium will be working at the maximum capacity during the event period."

But Garayev says that as a newer stadium in a warmer climate, BOS normally has a lower climate impact than other stadiums of a similar size.

"Every single stadium is a power-hungry beast and depending on new services offered by different venues, for example heated seating, turf heating and so on, the amount of energy consumption can change very fast. For example, stadium lights use a lot of energy, because when it comes to illuminating the pitch, we need to reach all the standards. Additionally we have an advertising screens, media façade, kitchen and catering services which need to heat up the food and keep the drinks cool, etc."

According to Garayev, all this represents roughly 20% of the stadium's total energy use. Additionally, the broadcasters who show the game live require powerful satellite transmitters and this number is about 11% of all energy usage, he says.

However, Garayev says BOS officials are doing their best to reduce these numbers, using modern technologies. "Thanks to the climate conditions of our country, we don't require seats and pitch heating, we can start the inside heating and cooling process later on in the season which we can save energy on this. We also try to use LED lamps which we have on our façade, in our

offices and working areas. And in the future, we plan to apply more modern technologies to reduce the usage of the energy."

"Summarizing all mentioned above, the power usage often depends on the climate area where the stadium is located and also the technologies applied for the operations of the venue. We always try to do our best to minimise the usage of the energy of the stadium, that is why there is most modern equipment at the stadium."

The stadium's design included a number of green elements. Before construction started in 2011, Boyukshor Lake next to it was cleaned. Approximately 6-hectares of greenery were put in the surroundings of the stadium, which consists of almost a thousand trees. It also uses KNX and HVAC systems which both can modify and control energy use in the building.

"The KNX system lets us save the usage of the energy at the stadium. If there is not any event or ongoing work in a specific area of the stadium, the lights are turned off automatically which our employees can monitor this process as well. The same process is also available for the HVAC system operations."

Azerbaijan is working with the the EU-funded Greenfoot program to improve the climate impact of football sites across the country. Jed Cohen, a senior expert and project leader at the Energy Institute who is working on the project, says they are finding innovative ways to involve the public in these projects such as crowd-funding, a model they're using across Europe.

One of those sites is the 6,500-seat Dalga Arena built in 2011. "Azerbaijan is obviously an interesting case

because the crowdfunding market there is not well-developed and also they have a relatively low energy price compared to Europe, so the economics is a bit different," he says. "Energy efficiency is also less developed in Azerbaijan than in the rest of Europe."

"So we're looking to put solar panels on the roof of Dalga because it's very sunny there, and that will go a long way to developing the renewables market in Azerbaijan. It will also give local people the opportunity to participate."

Once Euro 2020 is over, the stadium has plans for more energy efficiency improvements. Within two years, all lamps of the stadium will be converted to LED.

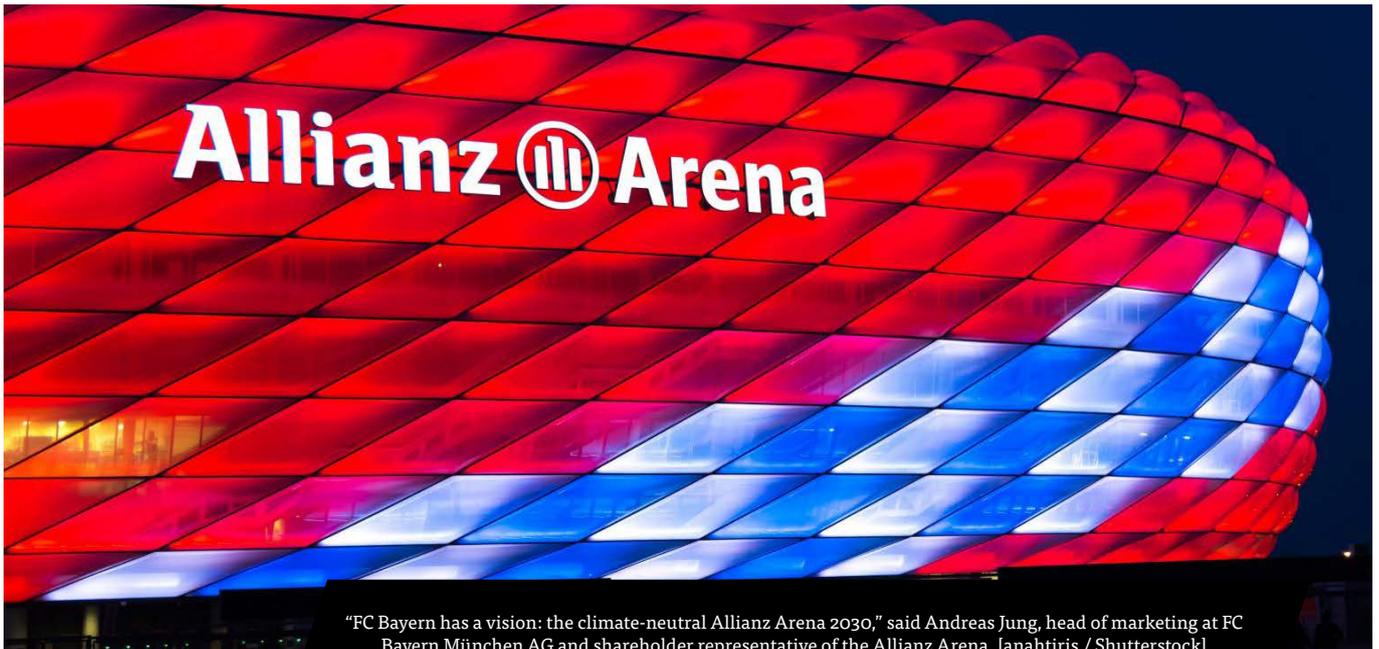
"During the construction period we did our best to assure the construction company to be efficient, but also to build a great building as we have now. Because this is very important for us and for the environment and community to keep this efficiency. We have a big water storage which helps us to collect water and reuse it for the second time," Garayev said.

"It's not a secret that massive stadiums and arenas across the world have the capability for a massive carbon footprint," he concedes. "However, those arenas and stadiums including BOS can also lead the way for implementing the environmentally friendly features and practices helping to reduce carbon footprint while also encouraging our visitors to follow the similar practices."

# Munich's Allianz Arena: a paragon of climate neutrality?

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By Nikolaus J. Kurmayer | EURACTIV.de



"FC Bayern has a vision: the climate-neutral Allianz Arena 2030," said Andreas Jung, head of marketing at FC Bayern München AG and shareholder representative of the Allianz Arena. [anahtiris / Shutterstock]

The Euro 2020 football cup's carbon footprint has come under green scrutiny because of the logistics required to move the teams around between the eleven organising countries. Is the Munich stadium part of the problem or part of the solution?

The Allianz Arena in Munich will host at least four games of the Euro 2020. As climate protection issues become ever more important to Europeans, fans are wondering whether football is doing its share in fighting climate change.

The German initiative Zukunft Profifußball (the future of professional

football) has made headlines by demanding that football clubs own up to their ecological responsibilities.

German football events have a history of laying claim to sustainability, starting with the 2006 world championships, which organisers considered climate neutral thanks to its ['Green Goal'](#) initiative.

"With the 2006 World Cup we have shown that major events can also be organised in an environmentally sound way," said then German environment minister Sigmar Gabriel.

The flagship measure implemented back then was a 100,000-tonne

carbon offset scheme to compensate the event's emissions with carbon reduction projects like tree-planting initiatives. Organisers also committed to cut waste generation and water use by 20%.

But those initiatives were largely dismissed by environmental groups. "Offsetting projects simply don't deliver what we need – a reduction in the carbon emissions entering the atmosphere," said Alia al Ghussain of Greenpeace UK.

Greenpeace probably have a point. Football events have tended to be rather generous in estimating their own climate impacts. At the 2006

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world cup in Germany, the Oko-institute [estimated](#) the added carbon emissions due to spectator and team travel at around 100,000 tonnes of CO<sub>2</sub> for the entire event.

For the [2016 UEFA Euro cup](#) hosted in France, UEFA estimated the CO<sub>2</sub> emissions due to spectator and team travel at around 517,000 tonnes.

It is unclear whether spectator and team mobility emissions increased five-fold in the 10-year period between the 2006 world cup in Germany and the 2016 Euro cup in France. But the discrepancy in CO<sub>2</sub> emissions between the two events certainly shows that estimates can vary widely.

### **'CLIMATE-NEUTRAL ALLIANZ ARENA 2030'**

Following the 2006 world cup, the Allianz Arena and its resident team, Bayern Munich, are now again coming under the spotlight.

Judging by official declarations, ecological sustainability has become a major consideration for FC Bayern. "FC Bayern has a vision: the climate-neutral Allianz Arena 2030," said Andreas Jung, head of marketing at FC Bayern München AG and shareholder representative of the Allianz Arena.

"We have been dealing with environmental issues since 2002 already," said Jürgen Muth, executive officer of Allianz Arena, adding that the stadium has a long history of working towards climate neutrality.

FC Bayern began implementing an Eco-Management and Audit Scheme (EMAS) in 2006, in a bid to reduce the stadium's carbon footprint and cut down costs. EMAS is open to anyone

fulfilling the requirements and serves as a management and controlling tool.

According to the [public records required by the EMAS scheme](#), the arena's renewable energy use jumped from 26% in 2017-18 to 69% in 2018-19. In 2019, FC Bayern won the European Reusable Award granted by the environmental NGO Environmental Action Germany (DUH) due to its introduction of reusable plastic cups.

"By using reusable cups, FC Bayern München is therefore leading the way, demonstrating that in football stadiums, environmental protection and entertainment can go hand in hand," said DUH deputy executive director Barbara Metz.

The arena also supplements its energy use with solar panels totaling 750 kW peak capacity and constantly seeks to optimise its energy use for heating and cooling.

### **ROOM FOR IMPROVEMENT**

There is still plenty of room for improvement though, starting with water use. In 2018-2019, the arena used upwards of 60 million litres of water. With 2.26 million visitors that year, this means more than 2,600 litres of water was used for each visitor.

Energy consumption is another area where further gains can be made. The arena seats a whole 70,000 people during international games and can boast almost 8,000 square meters of culinary space, all of which requires vast amounts of energy for heating and cooling.

And then of course, there is transport. For every game that is

hosted at the arena in normal times, more than 30,000 spectators arrive by car or bus, travelling upwards of 270km on average. The arena alone offers upwards of 11,000 parking spots for cars and buses in massive parking complexes.

On average, just under 50% of spectators reach the stadium by public transport, meaning further gains there are possible.

### **GERMANY'S EURO 2024 WILL BE 'MOST SUSTAINABLE IN HISTORY'**

Looking forward, UEFA has signed up to the EU's 2050 climate neutrality goal. And with the Euro 2024 taking place in Germany, the Allianz Arena will once again aim to make climate neutrality a core part of its ambitions.

"As co-organisers of the 2024 UEFA European Championships, we want to make the tournament the most sustainable and climate friendly in Euro history," said Phillip Lahm, managing director of Euro 2024 GmbH.



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