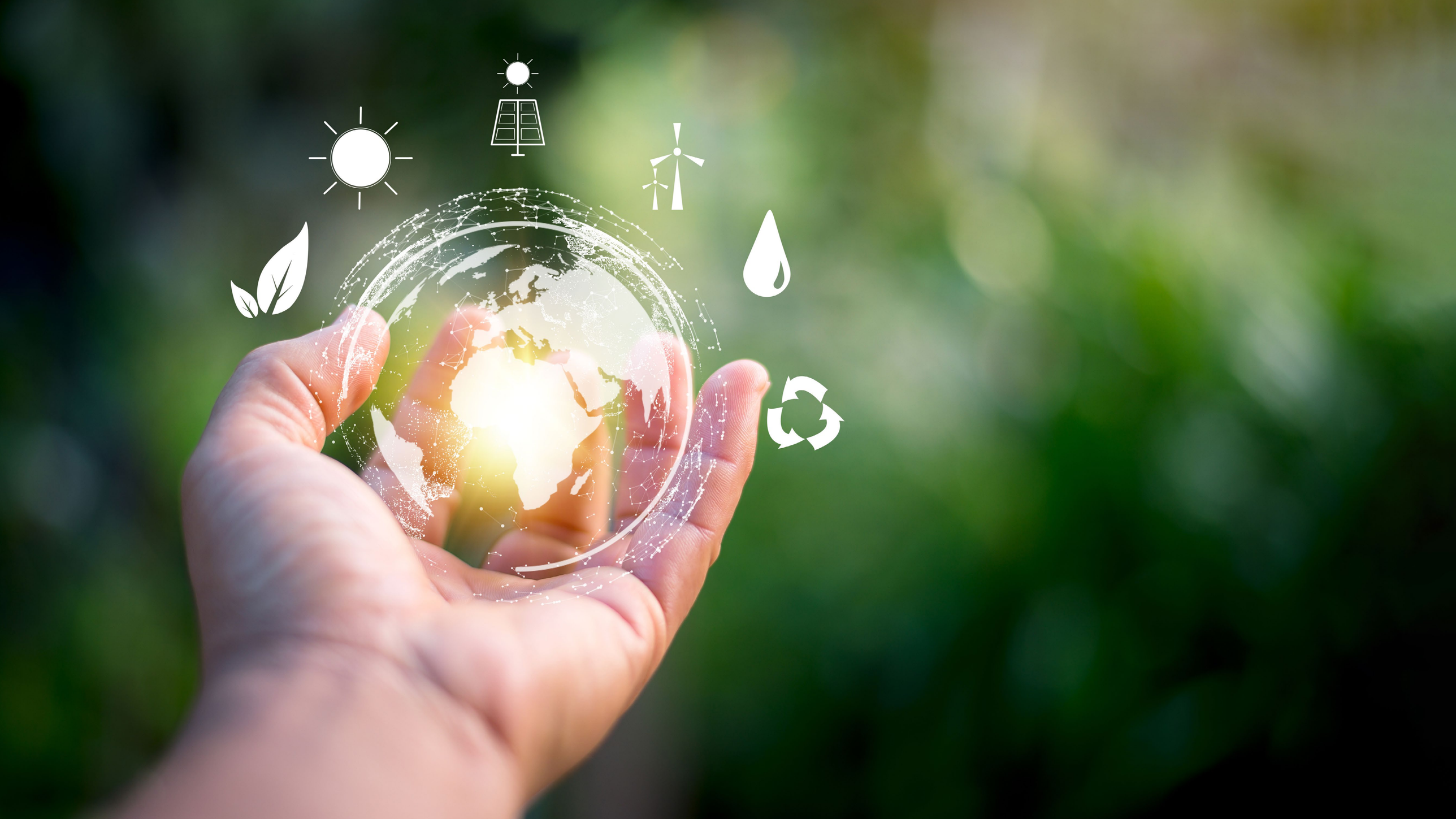
IBU

ENERGY EFFICIENCY GUIDELINES



INTRO

The energy crisis and climate change in general are an undeniable reality and affect the whole society including sport teams and events. As an international federation we feel the responsibility to act as role model and leader which is clearly part of our agenda TARGET26. In this context IBU's goal for 2030 is to reduce the sport's carbon footprint by 50% and become climate neutral and several projects have started following the approval of IBU's Sustainability Policy and Sustainability Strategy 2020-2030 in September 2020.

For further information please check the following link:
https://www.biathlonworld.com/inside-ibu/sustainability

VISION

WE ARE THE GLOBAL BIATHLON FAMILY, A SUSTAINABLE AND INNOVATIVE SPORT WITH INTEGRITY

The fact that we are a global Biathlon Family is our greatest asset, but it is not something that we can take for granted. Indeed, we will continuously need to nurture and evolve our family. We will need to be sustainable in everything we do to ensure that the future generations may enjoy winter and snowsports. We will need to be innovative to stay relevant for our stakeholders, especially the fans. We will also need to safeguard the integrity of our sport to be credible and to earn the trust of all our stakeholders.

Nevertheless, sport has a relevant socio-economic impact and already in the pandemic crisis was an integral part of the well-being of people in challenging times. Therefore we are convinced that hosting winter sport events in a responsible way in these times should not be questioned but seen as a chance to create awareness for potential change in behavior.
As mentioned above, many initiatives have already been taken and sustainability requirements are also part of the contracts between IBU and its organizers. The journey to increase energy efficiency at our events has started years ago but nevertheless we are constantly searching for potential optimization together with our main stakeholders.

THIS DOCUMENT SHALL

- Give guidance for energy consumption reductions for vari-ous stakeholders at IBU events
- Underline already existing measures for responsible energy consumption
- **CREATE AWARENESS FOR PERMANENT REVIEW OF CURRENT PRACTICES**

Choose energy efficient equipment

Switch off appliances when not in use

Run your event on renewables

Set your thermostat to 18-20° in winter

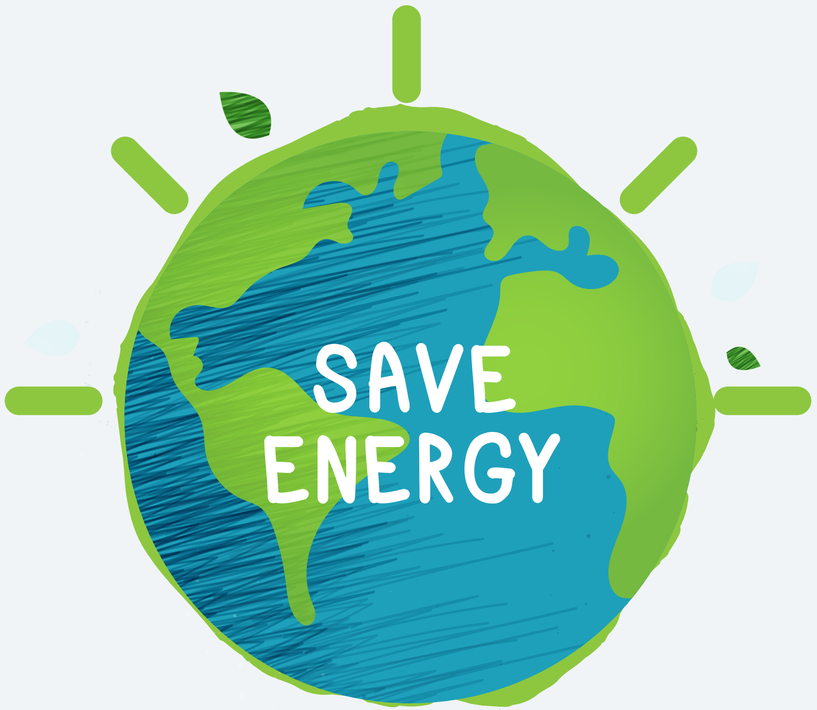
Use modern, fuel saving generators and monitor use to reduce running time

ORGANIZING COMMITTEES

AREAS OF ACTION

GENERAL ENERGY USE

- Collect data on energy use to make it easier to increase energy efficiency and lower costs ➜ set up meters in different use points to understand how much which function actually uses
- Write energy requirements into supplier agreements, e.g. oblige them to use only energy-efficient equipment and devices
- Task dedicated volunteers to check buildings/containers (lights, heating, windows…)
- Raise awareness among all employees and volunteers to save energy wherever they see any potential
- Inform spectators that the event is working hard to minimize its energy consumption and ask them to support these efforts



ORGANIZING COMMITTEES

LIGHTING

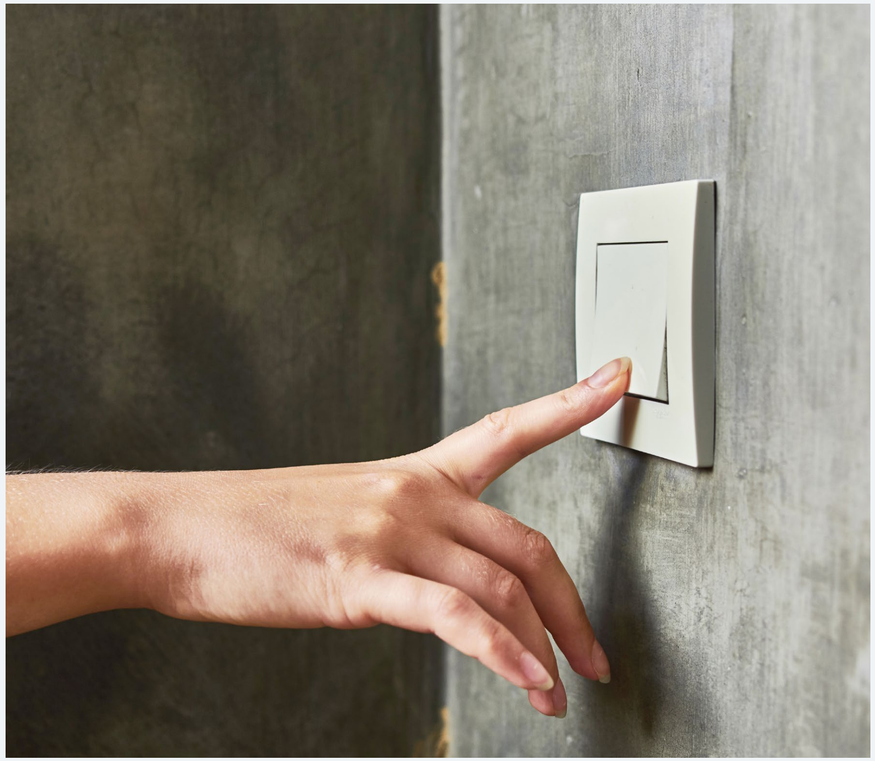
- Stadium/everywhere in venue: **Turn off lights at night**; at stadium, dim the lights after competition when TV broadcast is finished

  NOTE: Some basic lighting also during the night might be necessary for security reasons.

- Communicate with other users of stadium/tracks (e.g. locals/clubs skiing for training purposes) about **new demands on energy use and the cost of lighting**.

➜ There might be lights on for the event while the locals' training hours are not lit

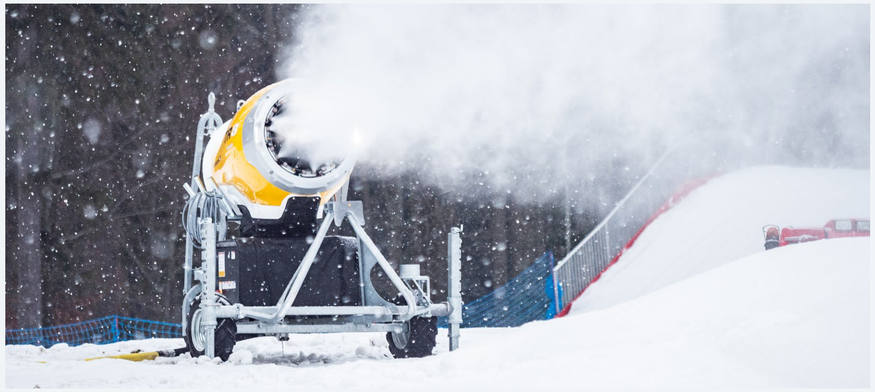
- Review/evaluate mid-term **switch to LED bulbs**
- Check where it could make sense to replace **light switches by motion detectors** and where to install timers



ORGANIZING COMMITTEES

SNOW-MAKING / SNOW MANAGEMENT

- **Only produce snow when it is efficient** (temperature-wise; check IBU Snow Network data)
- If you have stored snow, **prioritize use of stored snow** unless required and when conditions are perfect for snow production
- Collect data to understand **energy efficiency of snow guns** vs. pumps/cooling process
- **Use technical appliances** (e.g. GPS measurement) to detect the thickness of the snow layer in order not to waste artificial snow



HEATING

- **Reduce heating temperature in general**, especially over-night (note: one degree less room temperature reduces the consumption of heating energy by 5-6%)
- Any temporary infrastructure: **schedule set up as late as possible**
- Inform the participants by posters/signs to **reduce heating** temperatures and not use windows for cooling (containers, offices, hotels)

ORGANIZING COMMITTEES

TRANSPORTATION/MOBILITY

- **Promote the formation of carpools** among OC staff, employees, referees, volunteers

TV TECHNICAL POWER

- **Explore options with HB** not to have to run any technical power set-ups for 24 hours per day, including options for an emergency solution (grid or battery) that can cover any power outage for a limited period of time before the twin pack is used
- **Correct dimensioning of the temporary power supply** (generators) helps to increase efficiency

TV / MEDIA / MARKETING

- HB, marketing partner and media commit to take additional efforts to **reduce energy consumption without impact on the quality of their work**:
- **Optimize logistics** (e.g. travel with less vehicles, use shuttle service on site, organize material transport/deliveries in a more efficient way)
- Reduce the **highest energy demand to the minimum time necessary** (e.g. illumination in stadium)

  NOTE: To secure the quality level of the TV production, a certain amount of LUX is necessary. This might require using some limited lighting even during daylight hours.
- **Turn off devices and equipment not in use**, unless it's required to use minimum power to make sure the equipment is not compromised (e.g. screens, LED panels)

  EXPLANATION: Due to humidity in the air there is a risk of wet connectors in some electric elements (especially connectors). To keep a minimum temperature with electricity in the connectors some elements need to be with constant power (using LED and low power results in low energy consumption – especially when the colour of the screen is black).
- **Focus on LED lights** as the most efficient technology (latest generation)
- **Try to organize deliveries even more efficient** as in the past (less package volume and less weight if possible)
- **Make partners aware of the situation and find solutions** on how they can have a positive input as well (e.g. Viessmann heating systems, BMW hybrid cars)

FURTHER INITIATIVES TAKEN DURING THE PAST YEARS:

- Try to find more sustainable advertising products and materials - already implemented many of them such as lanyards, bibs, different banners and prints
- Try to use sustainable clothing for staff on site

SPORT / IBU RULES

- Check with IBU officials potential flexibility in:

  track preparation (depending on snow- and/or weather-conditions)

  - how often?
  - when is the best time?
  - which resources are used?
  - which tracks should be prepared?

  training times (set training times during daylight)

- Event and Competition Rules as e.g.: Art. 3.6 ➜ minimum temperature in team cabins: **reduced to 17°C** (instead of 20°C) ➜ the same shall apply for other stadium/venue buildings

PARTICIPANTS

- **Actions to take**

  1) Act as if you need to pay for it
  2) Review used practices

- **Don’t heat the rooms / cabins unnecessarily** (also applies for hotels)
- **For ventilation, open windows completely for a few minutes** instead of tilting windows constantly. Don’t switch on heating when windows are open
- Plug/turn off waxing irons (and any other energy consumers) when not in use
- **Switch off the lights** when not in the room
- **Share transport as much as possible**, use shuttle busses provided by the local OC
- **Do not run the engines of cars/busses** just to preheat the vehicle

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For any questions, please contact:
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ABOUT IBU The International Biathlon Union (IBU) is recognised by the International Olympic Committee as the international governing body for the Olympic sport of biathlon. Headquartered in Anif near Salzburg, the IBU is a non-profit organisation registered in Austria that regulates the sport and oversees competition organisation world-wide. In cooperation with its 60 member national federations, the IBU uses competitions, events, programmes and other activities to promote and develop participation in Biathlon throughout the world.