Saving Energy 
and the Energy Crisis

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Digital Town Hall, 10 November 2022
Energy at TU Braunschweig – basic facts

Consumption
- Annual electricity consumption: 30 million kWh
- Annual teleheating consumption: 35 million kWh
- Annual gas consumption: 1.7 million kWh
- Costs in 2021: approx. €10 million

How efficient are we already?
- In 2021, approx. 14% of heating energy and 20% of electricity saved (compared to 2013)
- Own photovoltaic systems generate 1,000 kWp

Savings targets of 20% heating energy and electricity
- Orientation on the model calculation of the Federal Network Agency
- We continue to offer classroom teaching
- Restrictions on the usual service and a lower level of comfort are unfortunately to be expected

Measures to save energy at TU Braunschweig

Statutory requirements
“Ordinance on Securing the Energy Supply through Medium-term Impact Measures”

- Maximum values for the air temperature in workplaces in public non-residential buildings
  - Offices: 19 degrees Celsius (light physical activities and predominantly sedentary work)
  - Laboratories: 18 degrees Celsius (light physical activities, mainly standing or walking)
  - Depending on the degree of physical exertion associated with the activity this may be 16 degrees Celsius or less (moderately heavy activities, mainly standing or walking, and physically heavy activities)

- Heating of common areas is prohibited (especially circulation areas, storage rooms)

- Decentralised drinking water heating systems, in particular instantaneous water heaters or decentralised hot water storage tanks, must be switched off unless necessary for operational reasons

- Outdoor illumination of public non-residential buildings and monuments is prohibited, with the exception of security and emergency lighting
How is the topic dealt with at the TU?

Advisory Committee on Security of Supply
+ core operations team

- Definition and communication of university-wide measures to save energy
- All faculties and status groups are represented
- Core operations team: suggestions and implementation

ad hoc task force on energy security

- Securing critical infrastructure in the event of a power failure
- Representation of all faculties concerned
- Technical support by Facilities Management

Ideas management via call and website

- Review by Sustainability Officer, Green Office and other persons
- Technical support by the Energy Advisory Board

Communication in the University’s committees and via the information channels of TU Braunschweig

- Senate, Executive Board, University Council, Deans’ Round Table, ...
- Website, “the week”, circulars, Information Portal
- Video message, internal events, external networking

Central regulations of TU Braunschweig

Extending the period during which the University is closed for the turn of the year until 6 January 2023

- Harmonisation of operations in administration and research in period when no lectures take place
- Remote work possible on two days in agreement with supervisor
- Corresponds to 3–5 days of vacation/flexitime used

Restricting the heating times of static heating systems

- Daytime operation of the heating systems is reduced by one hour at the beginning and end of a day from Monday to Thursday
- Lowered temperature at night from 17:00–7:00
- Lowered temperature at weekends from Friday 12:00 to Monday 7:00
- Lowered supply temperatures with the aim of achieving a maximum room temperature of 19 degrees Celsius (offices) Lowered temperature at night and at weekends by up to an additional 3 degrees Celsius
- Temperatures stable during lecture period
Similar regulations for non-static systems (ventilation-controlled heating)

- Consideration of times for laboratory work and practical courses
- Ensuring that teaching is also possible during off-peak hours
- Grouping of block courses in order to minimize the need for additional heating

Studies and teaching

- Weekend courses and block seminars during off-peak times will be taken into account in the planning
- Relocation of courses necessary to heat only a few buildings
- Capacity of student learning spaces is maintained (e.g. QR codes in central rooms)
- Restrictions on some services (e.g. opening hours of the University Library, heating of sports facilities)

Monitoring

- Energy web portal provides an overview of consumption by building and cost centre
- Comparison with previous months adjusted to weather conditions in the middle of each following month
- Aggregated percentage values for the entire TU are published internally at the University
- Energy Coordinators in the facilities have access to specific data

Information and Ideas management

- Central contact point for suggestions and feedback: energiesparen@tu-braunschweig.de
- Publication of all information on website www.tu-braunschweig.de/en/energy-saving
- Results of the call for ideas are also presented there, with reasons if suggestions are not pursued further

How can you contribute to the goals?

Setting thermostats correctly

- 19 degrees Celsius, corresponds to one bar below 3, should be reduced further at the end of the working day
- Dress appropriately if 19 degrees Celsius is too cool in the office
- Adjust working hours to heating times

Reducing electricity consumption

- Reduce standby mode power consumption: pick up a switch socket from the Electrical Workshop (for administrative staff)
- Switch off PCs at the end of the working day and use only one monitor
- Consciously switch off room lighting, use a desk lamp instead of ceiling light
- Optimize the use of rooms with ventilation-controlled heating

Remote work

- Make full use of possibilities in consultation with superiors
- Can lead to synergy effects, for example in the case of long commutes
Stay informed!

Central info website
Saving Energy

Mail
energiesparen@tu-braunschweig.de

Dossier in the Magazine

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