University of Chemistry and Technology, Prague	
Title	DECREE No. A/V/961/17/2022
Subject	Optimisation of consumption of electric power, heat, water and consumables at UCT Prague
Applicability	All school
Effective from	5.10.2022
Effective till	unlimited
Revision	As required and based on the efficiency of the proposed
	measures
Cancelled document	
Prepared by	
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#### Article I Basic provisions

- 1. This decree has been prepared as a methodological guide for optimisation of consumption of electric power, heat, water and consumables at UCT Prague.
- 2. The Decree is directed to the employees of UCT Prague working in the buildings of the Dejvice Campus, Technopark Kralupy and the detached workplace in Jankovcova Street.
- 3. Each manager is responsible, in compliance with the Organisation Rules of UCT Prague, for compliance of his/her unit with this decree.
- 4. A methodological guide for the General Practitioner of UCT Prague, the Crèche Zkumavka and the Administration of University Facilities will be issued separately.
- 5. When performing their work and study obligations, all employees and students are required to behave most economically in all areas of consumption. At the same time, the rules of safety and health protection at work as well as of fire protection shall not be compromised.

# Article II Savings in operation of buildings

- 1. For achieving savings of electric power, it is required to:
  - a) use indoor illumination economically, consistently switch off lights whenever daylight is sufficient. Keep windows clean, make sure lights are checked and maintained on a regular basis (to be ensured by each workplace);
  - b) reduce the operation of ventilation and air-condition units to a time when their use is absolutely necessary and the room temperature has exceeded 26 °C. Set the

temperature in areas cooled by air-condition to  $25 \,^{\circ}$ C (to be ensured by each workplace);

- c) ban the use of convection heaters, oil heaters, infrared heaters or other auxiliary heat sources except for special cases (e.g. health reasons, the central heating system being out of order) permitted by the respective manager. In case of a repeated breach, the respective workplace will be subject to financial sanctions paid from the operating costs budget of such workplace (to be ensured by each workplace).
- d) ensure inspections of leaks of pressed air from compressors, hoses and tubes. In addition, pay attention to proper switching off the compressors when compressed air is not needed (to be ensured by each workplace).
- 2. In order to save heat, during the heating season the temperature of the heating system will be set to the temperature of 21°C in the heated rooms. At the same time, thermostatic valves of all radiators in communication areas (corridors, staircases) will be regulated to the degree 3 as maximum, so that the temperature is maintained within the interval 15 16°C. At weekends, on public holidays and during the examination period, the temperature in the rooms not being used will be set centrally or, as the case may be, individually by manual intervention, to the value 15°C (to be ensured by the Department of Building Administration).
- 3. In order to save water, the workplaces are assigned the task to make sure that by the end of the year 2024 all water jet vacuum pumps (ejectors) directly connected to faucets in the laboratories will have been replaced by electric pumps or isolated water ejectors (to be ensured by each workplace). In addition, faucet aerators will be gradually installed centrally where appropriate by March 2023 (to be ensured by the Department of Building Administration). In such installation, the use of the faucet as well as the age and quality of water distribution system in the respective area should be considered. Installation of a faucet aerator may not always be an appropriate solution due to operational and technical reasons.
- 4. The Department of Operation and Technical Services will take care of the proposal, preparation and implementation of investment measures, which includes finding appropriate subsidies, for further increase of energy independence of the buildings of UCT Prague in the Dejvice Campus, namely for the following:
  - a) installation of highly efficient light sources (LED) and movement sensors (deadline by the middle of the year 2024),
  - b) insulation of external and internal parts of building envelopes and replacement of window panes (building A and the inner courtyard of building B) (deadline within one year from obtaining the financial subsidy),
  - c) central automated monitoring and management of energy consumption in compliance with Act No. 406/2000 Coll., on Energy Management, as amended, (deadline by the end of the year 2024)
  - d) possible installation of roof photovoltaic panels in the inner courtyards (analysis by the end of the year 2022, implementation based on the analysis after receiving a financial subsidy).

5. See to it that night operation of devices and machines with higher consumption of electric power or with significantly long operation is strictly reported via the <u>on-line</u> <u>intranet form</u> (to be ensured by each workplace).

### Article III

## Savings in carrying out educational, research, scientific and other support activities

- 1. For achieving savings of electric power, it is required (to be ensured by each workplace):
  - a) in case of hardware operation: to reduce the consumption by all users switching to alternative data storage from which their files will be accessible externally (from outside of the UCT buildings), which means that the PCs of the users will not have to stay turned on continuously. The guide how to use remote access to data is available at the school's website (<u>https://vc.vscht.cz/navody/ukladani-souboru</u>; <u>https://vc.vscht.cz/navody/cloud/onedrive</u>);
  - b) in case of PC's which are control components of hardware and/or serve for collection of data or their analyses: to consider whether they need to be in continuous operation; if they don't, they should be switched off. Those PC's that need to be in continuous operation shall be reported (Article II, point 5);
  - c) to reduce the number of freezers, refrigerators, deep freezer boxes and similar appliances, namely those manufactured before the year 2000. Such appliances will be checked on a regular basis and their maintenance will be ensured (defrosting, sealing elements). When replacing old appliances with new ones, focus will be on the highest possible energy saving. Not fully used appliances will be switched off or, if appropriate, their capacity will be offered to other workplaces so that such appliances can be used to maximum effect;
  - d) to re-consider the necessity of continuous operation of laboratory appliances and devices with high energy consumption (spectrometers, chromatographs, desiccators, reactors, autoclaves, sterilisers, laboratory furnaces, environmental chambers, pumps, compressors, washers, incubators, evaporators). If non-continuous operation is possible, care will be taken to switch off such appliances or use them only for the necessary time.
- 2. For achieving cost saving in office consumables, the following is recommended (to be ensured by each workplace):
  - a) minimize document printing,
  - b) use double-sided printing to maximum extent,
  - c) reduce colour printing, prefer the so-called ECO print,
  - d) further improve the efficiency of centralised purchase of toners and cartridges,
  - e) ensure effective central collection of used print cartridges.

### Article IV

### **Other measures**

1. To introduce a system of on-line training for employees and students in the area of effective energy management (to be ensured by the Department of Operation and Technical Services).

2. To introduce systematic energy management leading to implementation of measures aiming at reducing the volume of non-recyclable waste, increasing energy saving including higher ratio of renewable sources of energy, and at economical use of water (to be ensured by the Department of Operation and Technical Services).

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