



CHAPTER III

USE ENERGY-EFFICIENT EQUIPMENT

2.1.

Importance and Regulations

2.2.

Energy-efficient Equipment

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Tips and Types
for Graphic Design Teachers



2.1 CHAPTER II IMPORTANCE AND REGULATIONS

Graphic design requires the use of equipment such as computers, printers, and lighting. The European Green Deal aims to achieve a climate-neutral economy by 2050, and one of the key ways to achieve this is by increasing energy efficiency and reducing energy consumption.

Using energy-efficient equipment in graphic design is an important step in reducing energy consumption and carbon emissions.

By using energy-efficient equipment, graphic designers can reduce their environmental impact and contribute to the European Green Deal's goal of reducing greenhouse gas emissions.

THIS CAN BE ACHIEVED BY:

- **USING LED LIGHTS**
which can reduce energy consumption by up to 80% compared to traditional incandescent lights
- **USING ENERGY-EFFICIENT SETTINGS**
By using energy-efficient settings on computers, printers and lighting, designers can reduce their energy consumption.
- **USING NATURAL LIGHT**
By using natural light instead of artificial light, designers can reduce their energy consumption.
- **CHOOSING RENEWABLE SOURCE**
if the energy used to power the equipment comes from a renewable source, the carbon footprint will be much lower than if the energy comes from a fossil fuel source.



The exact energy savings and carbon footprint reduction for a graphic designer using energy-efficient equipment depend on several factors, such as the specific equipment used, the number of hours it is used, and the energy efficiency of the equipment. However, energy-efficient equipment can lead to significant energy savings and carbon footprint reduction.

Additionally, regulations and policies at the EU level, such as the Energy Efficiency Directive and the Ecodesign Directive, set minimum energy performance standards for certain types of equipment to encourage energy efficiency and reduce energy consumption.

MORE SPECIFICALLY:

- **THE EU'S ENERGY EFFICIENCY DIRECTIVE⁴**
requires member states to set targets for energy efficiency and to promote the use of energy-efficient equipment. This includes measures such as minimum energy performance standards (MEPS) for equipment and the use of Energy Star or equivalent labels.



2.1 CHAPTER II IMPORTANCE AND REGULATIONS

- **THE EU'S ECODSIGN DIRECTIVE⁵**
sets minimum environmental performance standards for energy-using products, such as computers and printers. This directive aims to reduce the environmental impact of these products by setting standards for energy efficiency, and by reducing the environmental impact of their use.
- **THE EU'S ENERGY LABELLING DIRECTIVE⁶**
requires manufacturers to provide information on the energy efficiency of their products. This allows consumers to make more informed choices when purchasing equipment.



REGULATIONS IN ROMANIA FOR THE USE OF ENERGY EFFICIENT EQUIPMENT

_____ In Romania, there are regulations in place to promote the use of energy-efficient equipment in various industries, including the graphic design industry. The National Energy Efficiency Action Plan⁷ sets targets for energy efficiency improvements in buildings, industry, and transport, and includes measures to promote the use of energy-efficient equipment, such as through the implementation of minimum energy performance standards and labeling schemes. Additionally, the Government of Romania has implemented a program called “Eco-Efficiency in Industry,” which provides financial support for companies to upgrade their equipment and facilities to improve energy efficiency.

NOTE

4— https://energy.ec.europa.eu/topics/energy-efficiency/energy-efficiency-targets-directive-and-rules/energy-efficiency-directive_en

5— https://commission.europa.eu/energy-climate-change-environment/standards-tools-and-labels/products-labelling-rules-and-requirements/sustainable-products/ecodesign-sustainable-products_en

6— https://single-market-economy.ec.europa.eu/single-market/european-standards/harmonised-standards/ecodesign_en

7— <https://www.anre.ro/ro/eficienta-energetica/rapoarte/rapoarte-de-monitorizare-a-implementarii-planului-national-de-actiune-in-domeniul-eficientei-energetice-pnaee>

8— https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Waste_statistics_-_electrical_and_electronic_equipment

REGULATIONS IN ITALY FOR THE USE OF ENERGY EFFICIENT EQUIPMENT

_____ In Italy, the use of energy-efficient equipment is regulated by the Energy Efficiency Directive (2018/2002/EU)⁸ which requires member states to set national energy efficiency targets and implement measures to achieve them. The directive also promotes the use of energy-efficient products and technologies, such as lighting and building systems. The Italian government has also implemented the Energy Efficiency Obligation (EEO) scheme, which requires energy suppliers to implement energy efficiency measures and to promote the use of energy-efficient products and services among their customers. Additionally, the Italian Ministry of Economic Development has developed a system of incentives and subsidies to encourage the use of energy-efficient equipment in different sectors, including the graphic design industry.



2.2 CHAPTER II

ENERGY-EFFICIENT EQUIPMENT

Energy-efficient equipment refers to devices and machines that are designed to use less energy to perform the same or similar functions as traditional equipment. Many of them now have Energy Star certifications, which means they are designed to use less energy.

MORE SPECIFICALLY, ENERGY-EFFICIENT EQUIPMENT IN GRAPHIC DESIGN INCLUDE:

- **ENERGY-EFFICIENT COMPUTERS**
These can include features such as automatic power-saving modes and low-power processors. Energy Star certified computers can use up to 70% less energy than non-certified computers.
- **ENERGY-EFFICIENT PRINTERS**
These can include features such as automatic power-saving modes and duplex printing. Energy Star certified printers can use up to 50% less energy than non-certified printers.
- **ENERGY-EFFICIENT MONITORS**
These can include features such as automatic power-saving modes and low-power backlighting. Energy Star certified monitors can use up to 50% less energy than non-certified monitors.
- **ENERGY-EFFICIENT SERVERS**
These can include features such as automatic power-saving modes and low-power processors.



2.3 CHAPTER II

TIPS AND TYPES FOR GRAPHIC DESIGN TEACHERS

Here are some tips and types for graphic design teachers on [how to introduce the use of energy-efficient equipment in the curriculum](#):

- **HANDS-ON WORKSHOPS**
Offer students hands-on workshops to use energy-efficient equipment. This can include using laptops, monitors, and other devices that are Energy Star certified.
- **CASE STUDIES**
Provide students with case studies of companies that have switched to energy-efficient equipment and discuss the benefits they experienced such as cost savings, improved work environment and increased productivity.
- **GROUP PROJECTS**
Assign group projects that require students to research and present on energy-efficient equipment. This can include comparing the energy consumption and costs of different devices, identifying the best practices for using energy-efficient equipment and creating presentations on the benefits of using energy-efficient equipment.
- **GUEST SPEAKERS**
Invite industry experts to come and speak about their experiences with energy-efficient equipment. This can provide students with real-life examples of how energy-efficient equipment is used in the field and the benefits it provides.
- **INTEGRATE INTO EXISTING LESSONS**
Incorporate energy-efficient equipment into existing lessons on design and technology. This can include discussing energy-efficient equipment as part of a lesson on computer hardware or as part of a lesson on sustainability in design.

By incorporating these tips into the curriculum, graphic design teachers can help students understand the importance of using energy-efficient equipment and how it can benefit the environment, their work and their careers.