

Computing for Human Services

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Electrical and Computer Engineering-IIUM University

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Chapter 18

ICT and Environmental Problem

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18.1. Introduction

In this information and knowledge era; ICT industry are growing very fast. Today, global society faces serious challenges in improving environmental performance, particularly with climate change, global warming, and resource management. ICT industry is widely contributing to global economy associating with innovation, invention and rapid development of almost all aspect of human life. ICT industry is responsible for global CO₂ emissions. Global environmental problems are affecting many countries' energy and industrial policies. Rapid increase in ICT product usage means more energy consumption and environmental problems. Estimated ICT consumption of energy will be about 15% of the total consumption worldwide in 2020. Therefore, many countries are establishing Green ICT policies which increase energy efficiency due to correspondence climate change. Governments especially in developing and Islamic countries need to adopt new strategic policies for efficient energy use in ICT. This study presents the current environmental problems related to green ICT and the efforts to solve it. Several studies have warning from the current energy consumption paradigm, based on newly changed ICT practices. This chapter provides a background for the next chapter which adopts guidelines for decision makers and ICT professionals to enhance their work toward green ICT and eliminating environmental problems.

18.2. Fundemantal to ICT and Environment

The rapid development in electrical, electronics, information and communication technology leads to the huge production of such products. The strong procurement power for such products is mainly because of huge advertisements in different media as well as reduction of products' prices. This leads to the unwise behavior of customers in buying products regardless of their actual needs. The result is more consumption of energy in production and operating ICT