

Chapter 7

Influence of the EU Circular Economy Action Plan on Turkey's Energy Policy and Investments in Renewables

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ABSTRACT

The European Union Circular Economy Action Plan is a new enactment but rapidly growing to transform EU economies into more sustainable sources and surroundings adopting measures that include renewable energy investments and low carbon strategy. As the world still faces huge environmental changes and climate problems, energy remains the major issue for both economic and ecological sustainability. Low carbon energy strategy is the main target for EU circular economy enforcing renewable energy sources which are healthy, clean, and cheap. In this chapter, circular energy act and its development in Turkey are explored and questioned. The study emphasizes the great potential of renewables in Turkey and shows that there is still much to be done to transform the energy market in order to adopt circular economy in the future. Barriers of economic risks and lack of cultural awareness strongly challenge the progress of Turkey in energy solutions. And more than that, those problems trigger the financial concerns limiting the future energy projects.

INTRODUCTION

The growing concerns in EU led to many environmental legislations and programmes since the start of the millenium. The latest one binding the economy and energy within the scope of low-carbon world is the EU Circular Economy. In December 2015 the European Commission published its Circular Economy Package that will enhance the strategy to protect environment.

DOI: 10.4018/978-1-5225-8109-3.ch007

The European Commission adopted an ambitious Circular Economy Package, which includes measures that will help stimulate Europe's transition towards a circular economy, boost global competitiveness, foster sustainable economic growth and generate new jobs. The Circular Economy Package consists of an EU Action Plan for the Circular Economy that establishes a concrete and ambitious programme of action, with measures covering the whole cycle: from production and consumption to waste management and the market for secondary raw materials and a revised legislative proposal on waste (EU, 2018a).

Regarding energy, measures aiming at promoting circular economy and using resources in a more efficient way also contribute to reducing energy demand: this is in particular the case when products are re-used, materials recycled, when all production and consumption chains are organised in a more efficient way (EU, 2018b). Energy is a hot issue central to social and economic well-being. For instance, it is assumed that more than 1 billion people have no access to electricity. Unfortunately, energy is the dominant contributor to climate change (Okay, 2018).

Circular Economy aims to scale up low-carbon and efficiency solutions that will fulfill the Paris Agreement and the Sustainable Development Goals (SDGs). It is a crucial act for policies that are consistent with ambitious plans on climate and enable business-led solutions to scale up and speed up the implementation of the Paris Agreement. Combating climate change and transforming the energy system are core challenges on the path to a sustainable future. The system planned to facilitate cutting-edge climate and energy solutions and worked with business, government and society to address critical climate and industry issues are for building a sustainable world. (World Business Council for Sustainable Development, 2018)

Acting according to the United Nations Framework Convention on Climate Change and mainly the Kyoto Protocol, cities benefit from becoming smart cities through energy service company (ESCO) model (Okay, Akman, Okay, 2008) as energy consumption decrease to a great extent but creating a safer and more comfortable environment for the people (Andretta, 2014). The integrated goals of energy security and poverty alleviation are inextricably linked with the need to reduce harmful air pollution and address climate change (Okay, 2016).

Under the programme that was put into action in 2012 to diagnose Green Economy In Action (United Nations 2012) United Nations is leading a forum with the World Bank named as Sustainable Energy for All. The three objectives of the Forum firstly announced in 2015, are for improving energy efficiency that has the clearest impact on *saving money*, especially buildings that require less energy to heat and cool improving business results, and delivering more services for consumers that cost the same but use less energy (Sustainable Energy for All, 2017).

Furthermore, natural sources of energy in creative ways (solar, wind, hydro, biomass, biofuel and geothermal) is cheap and clean for protecting environment and acquiring sustainable clean cities. In the last decade, energy shortages grew fast as global demand increases enormously (Renewable Energy Policy Network for 21st Century, 2017). Understanding the benefits of natural energy sources, countries are forced to work on legislature to provide incentives for renewable energy. The cost of renewable energy derived from nature is decreasing continuously as countries ambitiously adopted national strategic targets like providing energy efficiency enhanced (Okay, 2016) by the implementations of ESCOs all around the World (Okay, Akman, Okay, 2008).

At the same time, the World Health Organization (WHO) declared key facts about air pollution which is associated with unhealthy practices. According to WHO, over 4 million people die prematurely from illness attributable to the air pollution, more than 50% of premature deaths among children under 5 are due to pneumonia caused by particulate matter (soot) inhaled from air pollution and 3.8 million

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