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CIRCULAR ECONOMY AND ZERO WASTE TARGETS IN THE TERRITORIO & RISORSE BIOMETHANE AND COMPOSTING PLANT SANTHIÀ VC – ITALIA

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Abstract

Sustainability and circular economy are the dominant themes of the moment and are totally transversal to every sector, especially in the waste treatment sector where these issues intersect with the service offered to society. Good management of municipal waste is a service to society and an opportunity for the recovery of raw materials and energy. Modern engineering produces solutions and technologies which, when integrated, achieve the goal of almost zeroing waste to be disposed in landfills and total energy recovery of the same. Technologies, good engineering practices and the process procedures make plants safe for the environment and the operators, increase recovery efficiency, allow the operator a total control of the processes, and make the plant reliable and profitable. The purpose of this paper is to describe the full-scale waste plant of Territorio e Risorse Srl (T&R) of Santhià VC and explain the operational results in this revamped plant with modern design and technology. Start-up of the new anaerobic line showed: (i) plastic over screen production less than 15 wt. % of treated OFMSW; (ii) high specific biogas and biomethane production values (190 Nm³ dry biogas/ton of fed ingestate). These values, better than in the literature, show an efficient OFMSW valorization process and a reduction in waste produced. It is possible to make our mind on a series of important and decisive issues for the success of an AD project as well as to get some important data about plant performance which set a new benchmark or biogas and RNG production from food waste.

Key words: anaerobic digestion, composting, SRF, circular economy, zero landfill

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