

EPOS WP 4 – Tool validation and assessment

Lead: ArcelorMittal Maizieres Research SA

Overall cost reduction at AM Dunkirk demo site

D4.4

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Summary

The ArcelorMittal Dunkirk site was chosen as the demonstration site for the EPOS Project because of ArcelorMittal's initiative to advance sustainable industry by starting-up a district cluster leading to a better environment in Dunkirk according to industrial symbiosis principles.

The objective of this deliverable is to specifically prove the cost reduction on this district cluster resulting from the synergy between ArcelorMittal Dunkirk and the district heating network of the Dunkirk city. To do so, a methodology consisting of running the EPOS toolbox for this cluster and assessing the economic benefits and cost reductions induced by this synergy was followed. Since the steel blueprint is not fully integrated at this stage in the EPOS toolbox, ArcelorMittal Dunkirk model and the blueprint of district cluster were used in Osmose (the back-engine of the EPOS toolbox) for this deliverable, to check if the actual synergy would be a result of the EPOS toolbox. Afterwards, manual calculations on the actual synergy are done to assess the real cost reductions resulting after the implementation of this synergy.

This deliverable shows the power of the EPOS toolbox in determining if the potential synergy in AM district cluster makes sense and gives back the corresponding environmental and economic KPIs. Afterwards, manual calculations were done to assess the cost reductions induced by the implementation of the synergy. These calculations showed that the actual implemented synergy was the most profitable for all involved stakeholders compared to five other potential scenarios.