that are even more profitable. The fact that the cooling zone will give a better working environment should be taken into account. The benchmarking also shows that the airlocks from the ovens usually have too small heat content to be efficiently heat exchanged against ingoing air to the ovens. The contaminations that follow the airlocks also prevent using this air as ingoing air. Another reason is that there is a risk that to much air is pushed into the ovens if airlocks are used. However, there might be a possibility to use them for heat exchanging against facility ventilation air to reduce demand for space heating. To be able to implement thermal heat exchange further study is necessary in order to investigate the impact of contaminants released from the powders when cured in the cure oven. There is a possibility that these contaminants will stick in the heat exchangers and tests must be conducted to see if filters are required upstream from the heat exchangers. It should be noted that companies in Finland have successfully used the airlocks for space heating [5].

The economic results are based on an interest rate of 10% and 15% respectively. A lower interest rate would increase the net present value and the net present value ratio. The results in these projects show that Case 1 is the best investments from an economical perspective for both companies. However, Case 2 has other positive effects that are not accounted for in the calculations. For example a cooling zone would substantially improve the working environment by reducing the heat that is emitted to the facility. Results indicate, based on benchmarking between these two projects, that the powder coating industry may have an energy efficiency potential of 20% which corresponds to total energy savings of at least 105 GWh/year for the sector.

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