



## ELENA Completed Project Factsheet Rotterdam-Leiden Heat Infrastructure

<b>Location</b>	Cities of Rotterdam and Leiden, the Province of South Holland, The Netherlands
<b>Beneficiary</b>	Warmtebedrijf Infra N.V.
<b>CoM signatory</b>	No
<b>Sector</b>	District Heating
<b>Total PDS costs</b>	EUR 1 504 313.00
<b>ELENA contribution</b>	EUR 887 409.21
<b>Project development services financed by ELENA</b>	The preparatory activities for the Investment Programme included technical, financial and legal studies needed to support the permits request, to support the investment decision and to prepare the tender documents. These included preliminary design studies to the define integration of the heat recovered in the existing district heating infrastructure, including the trajectory of the connection network, preliminary design for the booster stations, business models, financial models, identification of potential investors and analysis of the legal model of Warmtebedrijf Infra N.V.
<b>Timeframe</b>	January 2016 – December 2019
<b>Basis for investment identification</b>	The investment identification was supported by several studies and preliminary activities carried out by the partners involved in the project. As result of these activities, several preliminary agreements were in place before the ELENA contract signature: <ul style="list-style-type: none"> <li>• Cooperation agreement between the cities of Rotterdam and Leiden;</li> <li>• Memorandum of understanding signed between Warmtebedrijf Infra N.V. and Nuon;</li> <li>• Memorandum of understanding signed between Warmtebedrijf Infra N.V. and Shell;</li> <li>• Letter of Intent signed between Heineken Warmtebedrijf Infra N.V..</li> </ul>
<b>Investment programme description</b>	The investment programme included an investment to recover waste heat from the Shell refinery located in the Port of Rotterdam and its connection to the existing district heating network through heat exchanger and pipe connections to the main DH network. A second component, related to the expansion of the Rotterdam district heating network to the city of Leiden and to Zoeterwoude did not materialize during the project timeline.
<b>Investment in implementation phase</b>	EUR 17.7m
<b>Results achieved</b>	Total energy savings of 42 GWh per year Total CO <sub>2</sub> reductions of 9 114 tonnes per year
<b>Leverage factor achieved</b>	20
<b>Lessons learnt</b>	The time needed to obtain the permits was longer than initially foreseen. Changes in the structure of the final beneficiary resulted in delays in the project implementation. The delays could have been avoided if these changes have been implemented anticipated and developed in parallel with other activities, immediately after the ELENA Contract signature.
<b>Further information sources</b>	N/A
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