To date, a majority of the work studying the public perception of CCS has focused on the potential sensitivities associated with the storage of CO\textsubscript{2}. However, Europe does not have any experience of large scale CO\textsubscript{2} pipeline construction or operation so this will be a new type of infrastructure for many to consider. As new projects develop that require the transportation of CO\textsubscript{2} offshore, the public’s reaction in Europe (as well as internationally) to planning proposals for a CO\textsubscript{2} pipeline running through their local area need to be taken into consideration. Europe does however, have pipeline experience from developing natural gas transportation infrastructure, which may have some case studies relevant to CO\textsubscript{2} pipeline development. In the USA and Canada there is extensive experience of CO\textsubscript{2} pipeline construction and operation; for example the new long distance pipelines like the one from Beulah, North Dakota to Weyburn in Saskatchewan. North America therefore has experience handling the public perception of CO\textsubscript{2} pipeline construction, however, it must be noted that the population densities in Europe and the environmental sensitivities of the regional populations are very different and hence direct comparisons may be difficult.

IEAGHG’s technical review considers the public perceptions of CO\textsubscript{2} pipelines in different regions, to further understand what the public’s concerns might be before construction of such pipelines begins. The study provides a synthesis of research to date and should act as an early reference point on issues of concern that could be used to build a public awareness campaign. Public engagement should begin in advance of the pipeline announcement and the review may act as a tool for project developers. This review looks at experience from natural gas pipeline developers and what issues may be translatable to CO\textsubscript{2} pipelines as well as exploring what additional issues might arise from CO\textsubscript{2} pipeline development.

This review is based on work published since the COOLTRANS project (funded by the National Grid in 2013) which is considered an important review of public perceptions of CCS at the time. International case studies, such as CO\textsubscript{2} pipeline systems in the USA and Canada have provided a majority of the current research available for this review. European studies have also been reviewed including recent German study looking at the public awareness of CCS projects.

The aim of this review was to consolidate the current understanding on the public perception of CO\textsubscript{2} pipelines to help develop reference material for a public consultation activity related to a new pipeline development and indicate what information could be readily utilised. This includes the current understanding of how to develop a public engagement strategy and any new information that might be required specifically regarding CO\textsubscript{2} pipelines for such a campaign.

Recent years have seen a dramatic increase in the amount of work studying the public perception related to carbon capture and storage. Although a majority of this work has focused on the geological storage of CO\textsubscript{2} the development of large-scale projects have seen a variety of aspects reviewed. This
review of published literature has shown that although extensive public outreach has been conducted (especially for larger scale CCS projects in North America) some important research elements into public understanding still remain. The review highlighted that there are limited examples of CO₂ pipeline construction in Europe and as more CCS sites develop more work will be required to develop suitable engagement strategies to effectively communicate the implications of pipeline construction to the public. Generally, the public do have some understanding of CCS prior to projects starting but it must be emphasised that the CCS community as a whole has to make greater steps in communicating the importance of the technology and how urgent and necessary it is to meet the Paris Climate Agreement which has gained a lot of media attention and it considered important to the general public.