The gas conversion project was undertaken to convert the Olefins cracker to run on ethane gas in addition to the liquid and gas feedstocks for which it was originally designed. The rationale for the project was to improve the economic performance of the plant and its long term viability by taking advantage of cheaper feedstock available as a consequence of shale gas production in the USA.

This change required major modifications to the ethylene cracker and the construction of ethane cryogenic offloading and storage facility. A new pipeline to transfer the ethane gas to the cracker also formed part of the project scope.

The project was split into 2 parts - Outside Battery Limits (OBL) including the import terminal and storage and Inside Battery Limits (IBL) comprising of the Ethylene cracker.

Through the appointment of an owner’s engineer, the client wished to bolster the functional engineering resource available to the project to ensure the EPC contractors engaged on the project produced designs and procured equipment and materials to the correct specifications and standards.

Other responsibilities of the owner’s engineer included: preparation of specifications and standards, answering technical queries, responding to concession requests and representing the client at vendor inspections and tests.

**Solution**

ABB supplied a team of experienced professionals on a strictly as required basis to support client responsible function leads. The skills and experience of the ABB personnel helped to ensure the modifications to existing plant as well as the design and construction of new plant areas were consistent with the client’s requirements.

Other solutions that ABB provided were:

- Resolved technical queries
- Attended meetings on behalf of client
- Provided human factor assessments
- One functional point of contact to aid effective communication and project delivery
- Interfacing directly with contractors on behalf of responsible functional leads
- Providing guidance and advice on the certification requirements for new equipment and systems

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Benefits
- Ensured plant design, materials and equipment were compliant with client standards, policies and procedures
- ABB engineers liaised with third parties and attended vendor visits thereby freeing up client resources
- ABB had previous knowledge of both sites, systems, plants and engineering standards
- ABB provided technical services where an independent service provider was required or EPC’s lacked capability