Ensus UK Ltd were considering uprating the evaporation section of their bioethanol plant at Wilton, Teesside, to improve plant efficiency and had identified two possible options.

Ensus recognised ABB’s strengths and proven experience on front end project definition. Ensus selected ABB to develop ±20% Total Installed Cost (TIC) estimates for the two options to enable Ensus to ascertain which, from an economic perspective, offered the best solution.

Based on the estimates Ensus were then able to determine whether the project was economically viable and select a preferred option.

This allowed them to focus on one option to proceed with the next stage of the project.

Solution
ABB developed a BEP based on process information provided by Ensus and produced two estimates using Aspen CCE (Capital Cost Estimator).

The initial input to Aspen CCE was a mix of direct download from Aspen process models provided by Ensus and input from data developed during production of the BEP.

As the BEP developed, the outputs from the Aspen models were revised and a continuous process of review and validation was carried out.

A multi-functional engineering team carried out the work comprising; project management and engineering, project estimating, piping / layout, civil / structural, C&I, electrical, construction planning.

The estimates were produced using Aspen CCE (Capital Cost Estimator).

A commercial risk review was held with Ensus which identified areas of risk requiring further attention during the next phase.
BEP deliverables included level 1 programme, 3D models supplied as Navisworks format, civil / structural layouts, report on electrical supply and distribution, constructability report including transport and heavy lifts, and a report describing the basis of estimate including sources of information, estimating techniques and assumptions.

Benefits
- The timescale was tight as the work was required to be completed to meet their approvals timetable; Ensus were provided with estimates for both options within seven weeks
- ABB were able to respond quickly and proposed the contents of the BEP which would provide credible definition developed from the limited available information
- The BEP and estimates were delivered on time and within budget