



# SCOPING STUDIES



**The simulation team builds a simulation model for the project, not just the plant. The simulation model includes equipment sizing calculations for all the included equipment, plant layout information, buildings and infrastructure rules and operating cost inputs such as manning schedules. The basis for this information is prepared and checked by the discipline engineers prior to being added to the simulation.**

Using this methodology Simulus can prepare a revised capital estimate with full equipment list and electrical load list in hours - not days or weeks as has traditionally been the case.

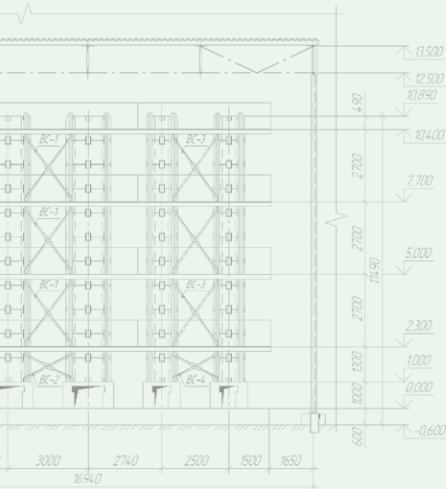
The increased detail also provides you with the ability to better track and control changes in the capital cost of your project over time. Input costs which are likely to change as a function of time can be clearly identified and adjusted in the estimate, rather than being hidden amongst factored costs.

In assessing project sensitivity, the impact of changing steel or labour costs or a new exchange rate can be investigated almost instantaneously.

The simulation output is not just a mass and energy balance. The simulation also outputs a full equipment list, electrical load list and operating cost drivers. The equipment list is used to prepare a 3D visualisation of the layout showing major equipment items, pipe rack locations and buildings.

The equipment list and electrical load list are linked into the capital estimation database to prepare the capital estimate. Civil, structural, electrical, piping, valving and instrumentation costs are currently factored for scoping studies.

Once your specific flowsheet is established, multiple scenarios can be rapidly prepared. The simulation tool is run for the chosen scenario, all equipment is resized by the simulation and the link into the capital estimate provides a revised cost. This enables enhanced detail to be provided earlier in the project development cycle.



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