

## Process Design and Strategies of Utilities and Offsite in the EPC Industries



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The successful operation of an oil and gas facility is highly dependent on the design of its utilities and offsites (U&O) component. EPC Companies, such as Fluor, need to provide a robust design of the U&O so that the facility can run efficiently and meets its objectives.

There are multiple U&O projects done by Fluor globally which are mostly for petrochemical complexes, refineries, and LNG plants. Solid experience in this U&O type of project is an advantage in any future projects with this scope.

Typical utility areas in a plant may include cooling water systems, air systems, steam and condensate, fuel, and nitrogen. Offsite facilities may include storage, flare systems, interconnecting piping, wastewater, and others. The process design of U&O requires a thorough understanding of the process units' requirements and the various scenarios the plant can operate under, including normal and startup cases. Typical designs include providing adequate allowances and margins in utility capacities.

Typical strategies in optimization of the U&O areas include these items: 1) feasibility study and selection of the type between the type of cooling or heating medium, 2) configuration of the equipment e.g. open or closed system and 3) flexibility considerations 4) sound basis and assumptions decided ahead of fully available information from inside battery limit (ISBL) areas.

In summary, the design of U&O is a significant part of EPC industry and is key to running an efficient and cost-effective plant.

### Biography:

Pierree Angeli Gilbuena has twenty-two (22) years of Process Engineering experience in pre- FEED, FEED and detailed engineering in various units in petrochemicals, chemicals and utilities and offsites plants. She joined Fluor in 2005 as a Process Engineer. She is the local SME for hydraulics and utility systems and currently the Process Engineering Department Manager in Fluor Manila office.