

Petrogenium.

Petrochemicals Planning & Optimization Appraisal

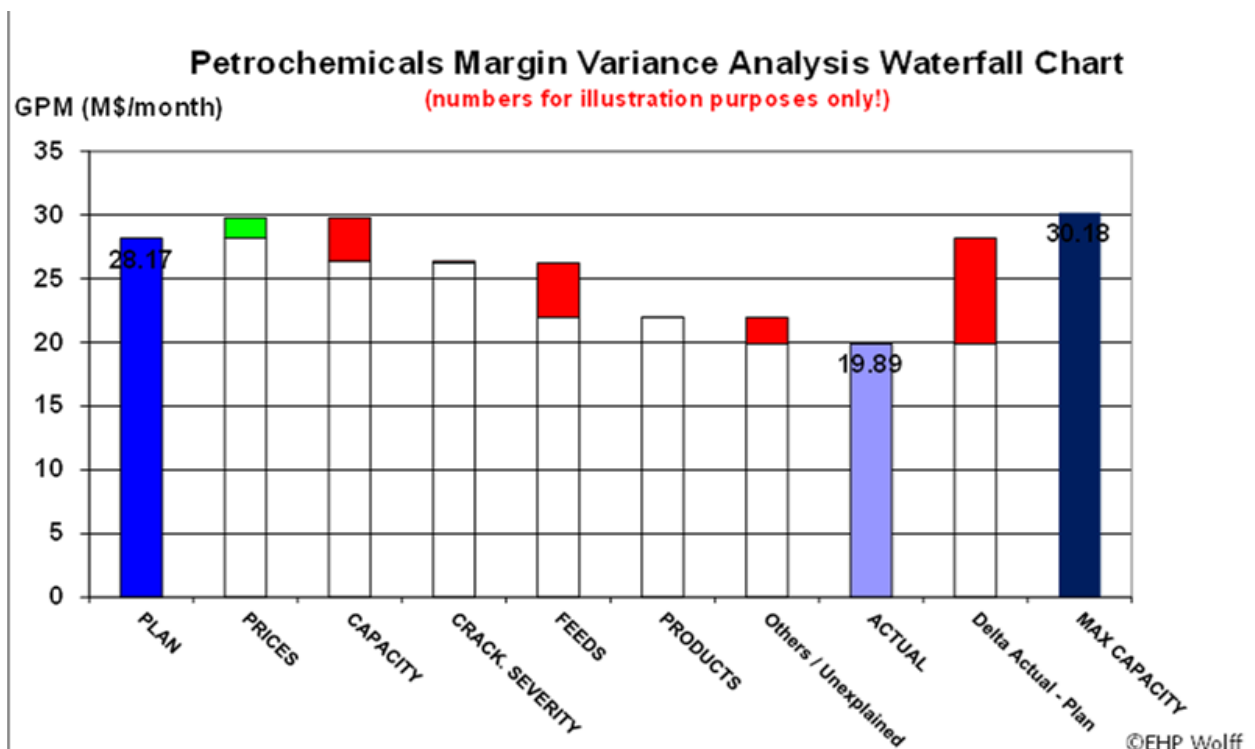
Three Elements of an Optimal Petrochemicals Plant:

1. Planning & Optimisation: creating optimal production plans.
2. Scheduling: creating and executing a safe and feasible implementation plan.
3. Appraisal: evaluating the actual performance.



While refineries run on a mixture of crude oils and/or condensates, petrochemical plants (such as steam crackers with their various downstream units) run typically on various types of naphtha – with recycled ethane – and optionally on vacuum gasoil, heavy gasoil, propane, butane and even hydrowax. Using Linear Programming (LP) optimisation models, amongst others, the (financially) optimum feedstock intake package can be determined.

Although planning and optimization and scheduling for petrochemicals are quite similar to their refinery operation equivalents, their appraisal process is often not as matured as for refineries.



Petrochemicals Appraisal

Petrochemicals Appraisal is the process to evaluate how the petrochemicals plant actually performed versus the final original optimized plan, typically a monthly plan and/or an annual plan.

This process creates far more granularity than just comparing Actual versus Plan which unfortunately is still the standard for many petrochemical plants.

The objective is to learn where the petrochemicals plant did well and where not, in order to provide better planning and optimization as well as improved financial performance.

A well-equipped petrochemicals plant should have a so-called 'backcasting process' (or 'retro-analysis'). The same LP – as for planning & optimization – is used to run multiple LP cases to verify the financial impact of various 'buckets', such as 'prices', 'plant capacities', 'steam cracker severity' (e.g. by steam cracker furnace coil outlet temperatures), 'feeds' (where naphtha is key), 'products', 'others / unexplained', etc. It is optional to assess actual margin performance against true site potential; 'Max Capacity'.



Why select Petrogenium.?

The above support will be provided by principal consultants with 30+ years world-class energy efficiency experience in the technology and hands-on know-how from operation of refinery units.

Because Experience Matters

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