HyNet Hydrogen Production Plant 1 – Technical Note

EPR Response 1 a,b,c – Environmental Management System

Summary

1 - Environmental Management System

a) Describe what new management and operational posts will be created for operating the proposed hydrogen production plant and explain how they will tie into the existing management structure of the Stanlow Manufacturing Complex. Notes: We expect you to describe whether the central functions of the refinery (e.g. maintenance, process technical assistance, engineering) will be expanded by hiring additional qualified personnel or otherwise by allocating existing resources in support of the proposed operations of the proposed hydrogen production plant.
b) Explain whether the posts required to operate the proposed hydrogen production plant will be above the existing headcount and funded out of a separate budget.
c) Explain how capital, operational and maintenance budgets for the existing refinery will interact with those for the hydrogen production plant and operations.

Response:

Operations

EOUK operates Stanlow Refinery as a number of integrated Operating Units divided into 4 Asset Teams, each with their own dedicated operations resources and sharing the resources of a central maintenance organisation. The Operations & Maintenance strategy agreed with EOUK for the project is that the HPP will form a new Asset Team within the overall organisational structure at Stanlow.

Estimated operations staffing requirement above the existing headcount is 19 FTE for Phase 1, 24 FTE for Phases 1 and 2 combined (Figure 1).

Maintenance

A separate Maintenance Organisation sub-structure will be set up within the EOUK Maintenance department. It is expected that this will initially comprise a Team leader and one technician for each of the rotating equipment, E&I and general mechanical disciplines (Figure 2). This will expand in line with the installation of future phases of HyNet. Technical support Subject Matter Experts (SME) will provide technical support to the PO related to the technologies employed by the project.

Engineering and Assurance

Under the existing structure at Stanlow Refinery, each Asset Team has an associated Technical and Engineering Assurance (T&EA) team. The T&EA team is independent of the operations team. The estimated T&EA staffing for the Plant is:

- Technologist (1 FTE)
- Rotating Equipment Engineer (0.25 FTE)
- Inspection Engineer (1 FTE)
- Electrical and Instrumentation Engineer (1 FTE).
- Mechanical Engineer (1 FTE)

Support Services

For a number of roles (Receptionists, Document Control, Administration, Warehouse Management, Finance and Accounting, Security, Human Resources, Firefighting, Information Technology (IT), Health, Safety and Environment) that already exist at Stanlow Refinery it is not envisaged that the Plant workload will increase EOUK's required levels of staff.

Figure 1.

Operations structure

- New dedicated Asset operations team formed
- Mirrors existing EOUK structure

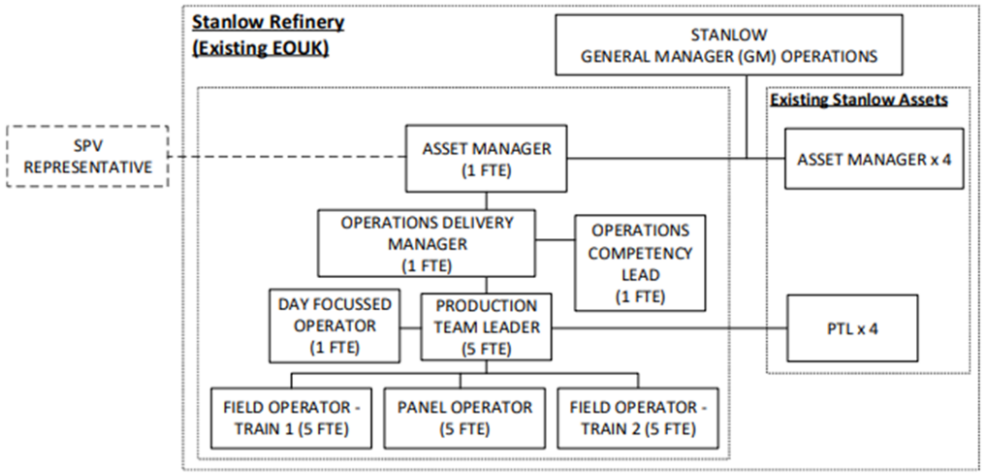
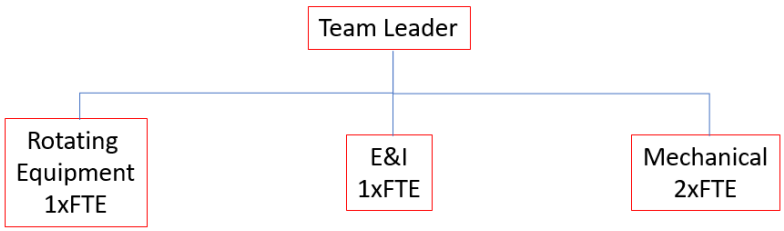


Figure 2.

Maintenance structure

- EOUK operates a centralised maintenance structure
- New dedicated maintenance team to be set up to ensure fair prioritisation
- Initial structure:



Resourcing

EOUK has an extensive, diverse and experienced workforce already highly skilled in the design, operation and maintenance of petrochemical process plant very similar to HPP, as well as decades of experience of processing hydrogen specifically. EOUK have built this workforce with a strong belief in recruiting and developing young talent, progressing them through the business using defined HR corporate policies, to make sure all employees have the right skills, knowledge, and experience to meet the national occupation standards, as well as the continued professional development of each individual.

For operators and maintenance technicians, young talent comes through TTE Training Ltd (OFSTED grade 1 "outstanding" academy) apprenticeships which result in a Level 3 NVQ, which Essar then builds on to ensure all apprentice operators and technicians have a Level 4 HNC qualification. To develop our engineering expertise, EOUK recruit both graduate and degree apprentice (through Liverpool John Moore University, Ofsted accredited) engineers and then develop them through to Chartered Engineers through IChemE- and IMechE-accredited company training schemes.

As EOUK will be the operating company for HPP1&2, the above strategies have been applied. However, the imperative of commissioning and operating this plant safely and reliably from day 1 will be underpinned by staffing with experienced operators, technicians and engineers drawn from within the refinery, with those roles back-filled by upskilled new hires, i.e. the overall headcount of EOUK will increase. The experienced pool will need to be reskilled in the specifics of the plant. This will be through a combination of plant simulation provided by the Delivery Contractor prior to commissioning and on-going support including training from the technology licensor.

Funding

The additional EOUK resources described above is likely to be funded through a SUMF-type contract (Services, Utilities, Materials and Facilities) between Vertex Hydrogen Ltd and EOUK. EOUK will charge the total costs for those personnel at agreed rates to Vertex as the asset owner.

The SUMF agreement will also cover charging of all capital and maintenance costs associated with the plant that will be allocated to separate budgets within the EOUK Enterprise Resource Planning (ERP) system. EOUK uses Global SAP as its ERP. SAP allows each activity and project to be easily categorised and separated from refinery budgets so that all costs can be captured and charged to VHL.