

**NATIONAL JOINT COUNCIL for the ENGINEERING CONSTRUCTION INDUSTRY
POTENTIAL PROCESS PLANT PROJECTS**

30th APRIL 2024

CLIENT	LOCATION	PROJECT	COMMENTS	LAST UPDATED
DOUBLE CLICK ON THOSE CLIENTS UNDERLINED FOR GREATER DETAIL				
<u>Air Products/ABP</u>	Immingham	Immingham Green Energy Terminal Hydrogen Production (IGET)	Capital value not yet disclosed. Finance is in place and a site identified. Air Products will construct and operate the facility. NIP Preliminary Meeting 20.2.24 – Examination commenced for up to 6 months. The development proposals will constitute a Nationally Significant Infrastructure Project (NSIP) as per the Planning Act 2008, and therefore require an application for a Development Consent Order to be made to the Secretary of State for Transport. Pre-examination still in progress.	22.4.24
<u>Alfanar Group</u>	Port Clarence, Teesside	SAF Lighthouse Green Fuels Project (Sustainable Aviation Fuel)	£1.5b capital value. Alfanar Group (Saudi based) to invest £1b to support the project on Teesside to produce SAF. This investment will support the Lighthouse Green Fuels Project in the Tees Valley. 1200 peak workforce. Dec 2022 Saudi owners announced that they have been awarded more than £11m from the UK Gov Advanced Fuel Fund to go ahead with sustainable aviation fuel plan. FEED expected to be complete by Worley Q4/24. 17.11.23 Alfanar awarded additional £8.66m Gov funding from the secon window of Gov's Advanced Fuels Fund. 20.11.23. 26.12.23 Alfanar Projects signs MoU with Gov of Pakistan for Overseas Employment Corp to expand workforce for upcoming projects. Due to commence construction 2025 with full operations 2028. No new information.	22.4.24
<u>Barrow Green Hydrogen Ltd</u> (Carlton Power Ltd)	Barrow Trafford Langage	Hydrogen Facility	£200m capital value. Construction to be 18 months. Application submitted by Carlton Power Ltd Q4/22. 18 month construction. The Trafford, Barrow and Langage projects are planned to enter commercial operation in 2025. The Barrow Green Hydrogen project has been developed in partnership with Kimberly-Clark. December 2023 Project awarded a financial contract from DESNZ of £50m. Subject to reaching a Financial Investment Decision in 2024, the Barrow project should enter commercial operation within two years. No new information.	22.4.24

BOC	Teesside	Hydrogen CO2 Capture Project	BOC Project selected by UK Gov to progress to next phase of the DESNZ sequence clustering process and is part of the E Coast Cluster. Expected to come on stream 2027. No new information.	22.4.24
H2 Teesside Ltd (BP)	Teesside	H2 Teesside 1GW Blue Hydrogen	Feasibility study being carried out with final investment decision due 2024 with potential operation 2027. This project to tie up with two other projects – Net Zero Teesside industrial cluster. BP signed memorandum of understanding with Venator to scope supply of hydrogen and with Northern Gas Networks the distributor. 12.10.22 BP submitted bid to UK Government. NIP accepted for pre-examination which will take 3 months to 22.7.24.	22.4.24
BP	Teesside	HygreenTeesside Hydrogen CO2 Capture 80 MW	Aiming for 80MW of green hydrogen by 2025 increasing to 500MW by 2030. March 2023 shortlisted to proceed to negotiations for UK Gov financial support. Community consultation to commence 1.6.23 until 6.7.23. No new information.	22.4.24
Centrica & Equinor	Easington	Low Carbon Hydrogen Production Hub	November 2022 Centrica and Equinor signed a co-operation agreement to explore developing a low carbon hydrogen production hub at Easington. John Wood Group joins project to evaluate development scenarios inc both green and blue hydrogen production facilities. No new information.	22.4.24
Centrica Storage Ltd/Equinor	Easington	Gas Receiving Facility	£120m capital value. November 2022 Centrica and Equinor signed a co-operation agreement to explore developing a low-carbon hydrogen production hub at Easington. Centrica awarded contract by the Tolmont Joint Venture & Infrastructure Partners. Contract will extend the life of Easington Terminal until at least 2030. Construction to include upgrade of compression facilities and improvements to the control room. No new information.	22.4.24
Centrica Storage Ltd/Equinor	Easington	Low Carbon Hydrogen Production Hub	Centrica and Equinor have signed a co-operation agreement to explore developing a production hub at Easington. Centrica and Equinor expect that the conversion of the Easington Terminal could produce an additional 1GW of low carbon hydrogen production coupled with the around 200MW off-taker demand. Wood Group working with Centrica to transform gas processing terminal to low carbon hub. No new information.	22.4.24
ETT Fuels/Progressive Energy	Stanlow, Ellesmere Port	350MW Hydrogen Production Plant	£360m capital value. Kent Plc awarded the pre-FEED engineering contractor to develop the facility. Construction expected to start Q1/25. 30.3.23 Successful in Track 1 of the UK Gov to proceed to negotiations for funding. Mitsubishi Heavy Industries Ltd (MHI) selected as technology licensor for the carbon dioxide capture section of the plant. Currently being tendered, the FEED phase of the project to begin Q4 2023. ESSAR changed name to EET Fuels 25.1.24. No new information.	22.4.24
ETT Fuels/Progressive Energy Vertex Hydrogen	Stanlow	Hydrogen Production Hub HPP1 350MW	£750m capital value. Jt venture spearheaded by Progressive Energy with £7.5m HMG funding. Hydrogen used by furnace from 2026 will be produced by Vertex Hydrogen (Jt venture Essar/Progressive Energy). This Jt venture part of the HyNet North West low carbon cluster. March 2023 shortlisted to proceed to negotiations for UK Gov financial support. January 2024 Cheshire W & Chester Council approved plans by EET (Essar Energy Transition) for Phase 1 - HPP1. To be developed by 2030. ESSAR changed name to EET Fuels 25.1.24. No new information.	22.4.24
EET Fuels/Progressive Energy Vertex Hydrogen	Stanlow	HPP2 1000MW	Vertex rapidly progressing second plant (HPP2) into FEED which will be completed in 2023. Plant has received support from the Net Zero Hydrogen Fund as part of its development. To be developed by 2030. ESSAR changed name to EET Fuels 25.1.24. No new information.	22.4.24

Fulcrum Bioenergy	Stanlow	Jet Fuel from Waste	£600m capital value. Fulcrum backed by BP have negotiated with ESSAR to develop site near Ellesmere Port. Fulcrum to build, own and operate plant which is expected to be operational 2027. Fulcrum Bioenergy awarded £16.8m from the UK Gov Advanced Fuel Fund. No new information.	22.4.24
Green Lithium	PD Ports, Teesside	Lithium Refinery	£600m capital value. Peak manpower 1200. Construction expected to take 3 years – commissioning 2025. Green Lithium have received backing from the UK Government’s Automotive Transformation Fund. Planning permission granted end July 2023. £13m funding secured to date and currently raising further capital. Green Lithium confident plant will open in 2027. Progressing with a Scale Up Plant development which is about 1/20 th size of Full Scale Plant. FEED studies on the FSP will continue to progress but will follow smaller scale up some 12 months behind. Given space on FSP, planning consent not an issue. Construction on SUP will commence by end 2024 and currently engaging with supply chain for construction, installation and commissioning partner. 19.4.24 Green Lithium announced that it has appointed leading global international law firm Allen & Overy as sponsor’s counsel on the fundraising process. The company has used its funds to deliver on key programme milestones, including: completing engineering studies and pilot-scale test works alongside engineering consultant Metso; appointing key suppliers including Worley, Zenito and WSP.	22.4.24
HiiRoc/Centrica	Brigg	49MW Hydrogen Pilot Plant	Plant to sit alongside Centrica’s Brigg PS – plans submitted to N Lincs Council. Centrica and HiiROC one of 20 winners as part of the Net Zero Technology Centre’s £8 million Open Innovation Programme. In November 2023, HiiROC announced a £28 million funding raised with new investors in partnership. The 12 month trial will be part funded by a grant from the Net Zero Technology Centre (NZTC). Ahead of the trial, Centrica has increased its stake in HiiROC to approximately five per cent. Cemex Ventures, Cemex’s corporate venture capital (CVC) and open innovation unit has increased their investment in HiiROC after an initial investment in 2022. No new information.	22.4.24
LanzaTech UK Ltd	Port Talbot	Project Dragon Waste to Jet Fuel	LanzaTech awarded £24.9m from the UK Gov Advanced Fuel Fund. The first stage of Project Dragon is to complete the detailed engineering design of the facility and secure the required planning permission and associated consents. Plans for the development were approved by Neath Port Talbot Council at a meeting on 26.3.24. Construction of the facility is now expected to start in the winter of 2024, with production scheduled to begin in 2026.	22.4.24

Meld Energy/World Fuel Services	px Group's Saltend Chemicals Park	Hydrogen Production Plant 100MW but possibly up to 200MW	£180m capital value. Meld Energy is a British Start up with US backing and currently bidding for development support from the UK Net Zero Hydrogen Fund. February 2024 Meld Energy announced that World Kinect Sustainability Ventures Corporation, has invested through acquiring a 50% stake in the company. Meld Energy and World Fuel Services are working to develop green hydrogen supply chains. The Hydrogen Production Plant is scheduled to have hydrogen flowing from 2026. Additional partners and investors will be invited to participate.	22.4.24
Scottish Power	Port of Felixtowe	Green Hydrogen Plant 100MW	£150m capital value. Scottish Power (owned by Spanish Co Iberdrola) planning to build green hydrogen plant at Port of Felixtowe. Proposals are for 100WW plant to provide enough fuel to power 1300 hydrogen trucks from 2026. Application submitted to the UK Gov's Net Zero Hydrogen Fund. No new information.	22.4.24
Sembcorp Energy UK/Nova Pangaea Technologies/BA	Teesside	NOVAONE Bioethanol Facility Project Speedbird	Nova Pangaea Technologies has signed an agreement with Sembcorp to build a new commercial plant – NOVAONE. Project Speedbird was launched in 2021 and was granted nearly £500,000 by the Department for Transport. This work is now complete and so the next stage of development can begin. 24.7.23 International Airlines Group announce investment into NP to drive UK sustainable aviation fuel in addition to SAF commitment. Project Speedbird has secured a total of £9 million from the Government's Advanced Fuels Fund (AFF) competition. No new information.	22.4.24
Shell/Uniper	Humber Hub Blue Project, Killingholme (Blue Hydrogen Plant)	H2UB 720MW	Shell teamed up with Uniper to develop proposed new facility. Agreement signed April 2022 with Uniper to work on their project at their Killingholme PS site. In November 2022 Process design package contracts awarded to Air Liquide Engineering & Construction, Shell Catalysts & Technologies and Technip Energies to deliver the process design studies. The three companies will participate in a competition to engineer the technology and plant design needed for the project to move to the FEED phase, ahead of a final investment decision expected to be taken in the mid-2020s. No new information.	22.4.24
SSE Generation & Equinor	Keadby	Keadby Hydrogen PS 1800MW	At development stage. Final investment decision will depend on progress of policy frameworks. Keadby Hydrogen PS will connect to the shared infrastructure being developed by the E Coast Cluster which is a collaboration between Zero Carbon Humber, Net Zero Teesside and the Northern Endurance Partnership. The project will enter environmental scoping in April 2024 before SSE and Equinor launch a public consultation ahead of a full planning application being made in due course. No new information.	22.4.24
SSE & Equinor	Saltend Chemicals Park, Hull	H2H Saltend, 600MW Hydrogen Production Plant	Project to convert natural gas to hydrogen. Final investment decision to be made 2023 for engineering and build 2024-2026. Planned to be operational 2027. January 2023 FEED contract awarded to Linde Engineering and the Ops and Maintenance Service awarded to BOC (both Linde Cos). March 2023 NOT shortlisted to proceed to negotiations for UK Gov financial support. No new information.	22.4.24

SSE Thermal & Equinor New Energy	Aldbrough	Aldbrough Hydrogen Pathfinder Project (Cavern Storage) & Hydrogen Production	SSE Thermal developing plans for hydrogen storage unit (9 underground salt caverns). Project due for completion 2028. January 2022 two key contracts awarded to Atkins to carry out feasibility study and ERM for the environment re H&S aspects. Contract signed with Siemens Energy to deliver first phase FEED who are also involved with hydrogen plans at Port of Immingham. Project could be operational by 2025 subject to planning consents and financial decision in 2024. The UK Government has recognised its potential by progressing it to the due diligence phase of its Net Zero Hydrogen Fund, which aims to support the commercial deployment of new low-carbon hydrogen production projects during the 2020s. SSE Thermal's Aldbrough Hydrogen Pathfinder project has been selected by government to progress to negotiations as part of its Net Zero Hydrogen Fund. NIP application expected April 2025.	19..4.24
Storegga/Shell/Harbour Energy/ North Sea Mid Stream Partners	St Fergus	Acorn Hydrogen	Acorn is a joint venture, of Storegga, Shell UK, Harbour Energy and North Sea Midstream Partners (NSMP). Adjacent to the St Fergus gas terminal. July 2023 Acorn Project advanced directly into Track-2. Entering the Track-2 process will allow Acorn to commence detailed negotiations with Government. 14.12.23 Acorn project signed MoU with Uniper to ship and store captured CO2. No new information.	22.4.24
Tees Valley Lithium (wholly owned subsid of Alkemy Capital Investments)	Wilton Works, Teesside	Lithium Hydroxide Processing Facility	£200m capital value. Development to be built in phases to eventually comprise 4 production lines each producing 24,000tonnes of LHM pa. Tees Valley Lithium gained planning consent November 2022. TVL has appointed Wave International as its lead engineering and technology partner. Focus now on completing FEED and assembling construction management team. 1000 workforce. 30 year lease for the site has been signed by Tees Valley and Sembcorp Dec 2022. Jan 2023 Project received First Phase Approval from UK Gov £1b Automotive Transformation Fund. At January 2024 Project financing discussions advancing with multiple potential providers of debt, strategic equity and green bond finance; mezzanine finance discussions with tier one financial institutions progressing well. Full production expected in 2026. No new information.	22.4.24
Velocys Plc & BA (Altalto)	Immingham	Altalto Project Waste to Jet Fuel	Project partnership including Velocys, BA and Shell. NELC granted planning permission May 2020. Worley appointed as global engineering partner. Velocys Altalto awarded £27m from the UK Advanced Fuel Fund. Subsidiary Altalto Ltd has now completed the work necessary to claim the first £7m tranche of the grant. The project has also obtained the first tranche of private funding for the period from 1 April 2023 from its existing private sector participants. Following the completion of FEED and a successful final investment decision, construction is set to begin in 2025 with full commercial operation expected in 2028. Following the award of the DfT grant, the Altalto Immingham Project has entered into a number of technology license and engineering services agreements with project technology licensors and the FEED contract with Bechtel Ltd. A final decision on the plant due next year with possible construction in 2026. No new information.	22.4.24
VPI & Air Products	Immingham	Humber Hydrogen Hub H3 800MW	VPI and Air Products signed Jt Dev Agreement July 2022. The H3 project has submitted an application for "Strand 1" funding as part of the Net Zero Hydrogen Fund (NZHF). Both companies move towards an investment decision. No new information.	22.4.24