

IQE Newport performance review 2021.
Environmental Operating Permit
EPR/AB3893FZ

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2021



Prepared on behalf of IQE Silicon
Compounds.
Andrew Patterson.
HSE Engineer IQE.

Introduction

This report has been prepared for Natural Resources Wales “*the regulator*” in line with the requirements of IQE Silicon Compounds “*the operator*” environmental operating permit EPR/AB3893FZ to satisfy permit condition 4.2.2.

General Information

This is the third report submitted by IQE since the issue of the operating permit by the regulator on 28/02/2019 and as such it may continue to evolve as future iterations are submitted.

During 2021 IQE sites across South Wales have engaged with Achilles to gain accreditation to ISO 14064-1. The standard specifies principles and requirements at the organization level for the quantification and reporting of greenhouse gas (GHG) emissions and removals. It includes requirements for the design, development, management, reporting and verification of an organization's GHG inventory. IQE envisage gaining this accreditation during 2022.

During 2022 IQE will submit in accordance with its permit requirements its four yearly reports which will be submitted to the NRW via e-mail.

VCSEL demand continued to grow in the South Wales businesses throughout the period ending 2021. Since the start-up of the Epi Mega-Foundry in Newport in late 2017, the plan for migration of the VCSEL product from St.Mellons to Newport was key in order to meet the growing customer demands.

Although 10 x MOCVD reactors were in place and qualified in 2019 only a few of them were running in anger, 2020 really saw the true potential of the volume production that could be achieved and this was realised with an increase of ~ 60% in productivity and throughput, 2021 volume production remained steady. To date, this is the only volume-manufacturing process at IQE Newport, with arsine emissions the only point of interest.

IQE are exploring the possibility of facilitating Phosphine in NP but that will likely be early 2023.

Monitoring Results (Condition 4.2.2 (a))

As per conditions of permit IQE Silicon Compounds Newport has no requirement to publish any monitoring data for site on an annual basis. The only requirement, which has been met, was initial emissions to air reporting.

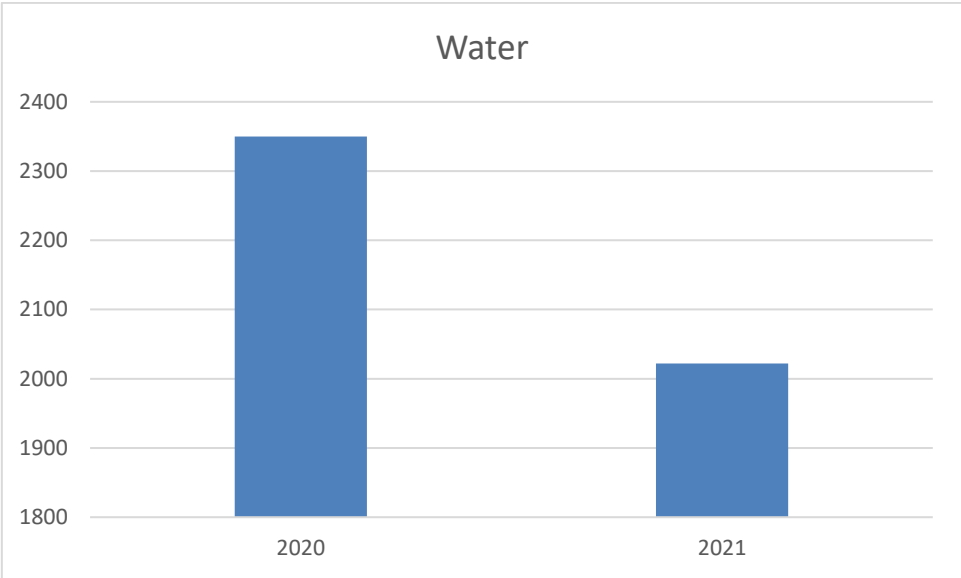
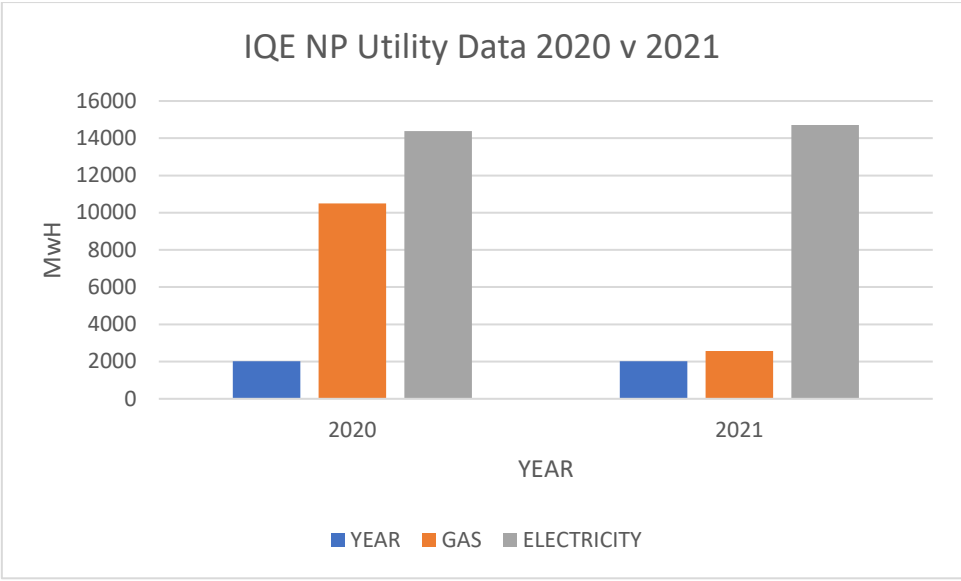
Annual reports of energy and water usage are required to be made on an annual basis, for year ending 2021 this has been done using NRW forms E1 for energy usage and W1 for annual water consumption. As per direction of the NRW Performance Form 1 has also been compiled for 2021 and submitted.

As per permit conditions IQE Silicon Compounds Newport will in the future when the second stack is commissioned and further reactors come on line have the emissions to air monitored via an MCERTS company.

Following permit condition 1.2.1.B IQE NP will during the course of 2022 submit its four yearly report detailing opportunities to increase energy efficiency, opportunities to improve the efficiency of raw material & water use. IQE will also detail in this report efforts being made to reduce waste and its impact on the environment.

Annual Comparison

The following data tables show the comparison in utility & water usage at IQE Silicon Compounds Newport 2020 v 2021.



All water consumption figures are shown in m3.