



# Infrastructure requirements for MACC development

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## MACC (Machrihanish Airbase Community Company)

MACC is not motivated solely by profit; our purposes are for the social and economic benefit of our community, and this is reflected in our open and flexible approach to land and property leasing.

We support our local community with direct spending on local contractors of over £2.42M and charitable donations of £75,000 to local good causes.

Although MACC has resources and a robust internal infrastructure sufficient to develop significant projects and to attract developers to invest in large-scale projects, investment is required in Kintyre's infrastructure to improve the electricity and internet supply.

This paper outlines some key projects that we feel will provide a secure future both for MACC and the local communities, providing valuable assets and resources for the local communities and National directives but also providing necessary jobs and training opportunities for the local population.

## Datacentre

The Data Processing and Hosting Services industry is forecast to grow over the next five years as businesses continue to incorporate data technology into their operations [1]. Scotland, especially the West Coast, Argyll, is lagging behind in providing these services and support. Although Scotland has many qualities required for datacentre development, because of the lack of government support and investment we see business in Northern Ireland, the Nordic Countries and England accelerate whilst Scotland is missing out on valuable opportunities and asset development.

We were shortlisted as a preferred datacentre location [5] based on the unique facilities offered at Machrihanish. Machrihanish has both the physical space and access to sufficient green energy from nearby existing and planned windfarms. These factors are MACC's greatest strengths over other potential datacentre sites in Scotland, however, importing energy onto the site and data connectivity is the biggest challenge.

By 2025-26, it is expected that industry revenue from datacentres and associated support networks will grow at a compound annual rate of 4% to reach £2.6 billion [2]. Scotland has many of the qualities required, cold clean air, abundance of available green energy, relatively cheap land and with improved local infrastructure we believe that the Kintyre and Campbeltown could be leaders in this growing market bringing along with it the requirements for a highly skilled workforce. There is a deficient of available high skilled and highly paid local jobs and this needs to be addressed to prevent the further decline of the West Coast and provide opportunities for our community. A datacentre would provide this for the Kintyre.

Critical to new datacentres is the provision of large amounts of green energy and adequate infrastructure to deliver it as laid out in the European Green Deal [3] to achieve its goals. MACC can currently deliver 2MVA - 4MVA import/export. We would need to upgrade this to 15MVA at a cost £1,440,000 to provide for a datacentre at the scales required. Should this need to be increased then our studies have shown that we would need a buried cable from Carradale GSP to provide the

additional energy at an estimated cost of £10M. However, with this future planning Machrihanish would be a national player in datacentre provision.

Other options for energy provision with cost are a private wire from Tangy IV to MACC (10km) is £5.4M for 80MW (not expected to be expanded until 2028). Private wire from Beinn An Tuirc (12km) is £7,762,230 for 123MW.

Additionally, there is potential for expanding the solar farm. Maximum solar deployment potential at MACC is 35MW. Including third party land it is 434 – 50MW. Estimated install costs excluding grid £24.5M - £34.5M.

Along with this there needs to be an improvement in provision of fibre for connectivity at MACC. Currently there is only one fibre - Openreach Fibre solutions at Craine Comm Mast and to the former CS Wind Factory. The Campbeltown 'Full Fibre' project is ongoing, delivering 67Mbps, not high speed. The R100 Scottish Broadband Voucher Scheme is still in operation. Additionally, the nearest subsea cable runs from USA to Northern Ireland on route to Europe, with no landing points in Argyll.

## Hydrogen

Scotland has an abundant offshore wind resource that has the potential to be a vital component in our net zero transition. If used to produce green hydrogen, offshore wind can help abate the emissions of historically challenging sectors such as heating, transport, and industry [4]. The energy must also be accessible in Scotland if Scotland is to benefit fully from it.

The Kintyre is connected to the UK's transmission network via Crossaig transmission substation. A 33kV overhead line runs south from Crossaig over Carradale grid into Campbeltown substation. It reaches MACC Airbase at Parkfergus substation (south of the Airbase) where it steps down from 33kV to 11kV with an import capacity of 4MVA (currently secured maximum import capacity of 2MW).

MACC commissioned a study to investigate wind and solar solution that could supply MACC with energy onsite over time and models for also producing green gaseous H<sub>2</sub> and liquid LH<sub>2</sub> utilising PPA (Power Purchase Agreements) and offsite wind options.

When hydrogen is not being produced, compressed, and stored, any excess green energy should be exported to the grid or curtailed. Being able to export to the grid is essential to make any hydrogen facility viable and to create an important secondary revenue stream. It is equally as important to be able to import energy from the grid or directly from a private wire as required to maintain the hydrogen production during periods of low green energy production.

We have 250KW solar array, with planning permission for 1MW. We currently have an agreement with SSEN to export 250KW and to increase this it will take an assessment of the infrastructure and carrier.

We would have to wait until 2027 or 2032 until we could start to generate green energy onsite as all the available space has been taken up. We would be joining a queue even for just 4MW as the capacity at Carradale 1 & 2 has been reached already with 70MW and 27MW planned projects in front.

## Others

We have other projects in that we would like to kick start at MACC. All our projects require green energy not only to make the projects viable but also to meet Scottish Government and Global expectations for carbon neutrality. These projects include the distillery and aquaculture projects. For

our aquaculture plans the provision of green hydrogen, provides the opportunity to produce green oxygen which we can use in the Scottish onshore and developing offshore salmon farming industries.

Additionally, MACC lends itself for the optional of being a hub for space travel and rocketry. The continued interest and investment in space travel has also led to a drive for this to be more cost effective and more sustainable. We believe we can be leaders through Discover Space UK, in the development of green hydrogen and green oxygen.

MACC offers a unique opportunity to lead in the development of new types of industry and the provision of new technologies to support traditional industries. We believe we have the foundations to be leaders in the field and turn what is currently under utilised facilities and infrastructure into a thriving business and training site. Our communities need access to new industries with opportunities for training and development. We can become a centre for a highly skilled workforce. What we need is for visionaries to invest in our future, so that we can become a growth partnership supporting the needs of our community and growing the West Coast of Scotland.

The Rural Scotland in Focus report of 2012 [6] compiled a vulnerability index linked to aging population, population decline with the loss of young talent and loss of jobs. Within this they identified 90 Scottish towns of which Campbeltown was identified as one of the most vulnerable. This study has been further supported by the findings of the Built Environment Scotland Forum in 2012 [7], which predicted a 25% loss in the population of Campbeltown by 2025.

The National Archives of Scotland [8] have released figures predicting a 15% decline in the population of Argyll and Bute by 2045, this is set along a backdrop of a 10% increase in population in Glasgow and other central belt areas. We cannot continue to allow the decline of the Argyll and the West Coast. Investment is needed to rebuild and provide jobs and opportunities for both the local communities and to attract workers from the overpopulated central belt of Scotland. MACC can be a centre for growth, to readdress these issues, with investment and support.

[1] IBISWorld Data Processing – Hosting Services in the UK – August 2021

[2] IBISWorld Colocations facilities in the UK – March 2021

[3] European Green Deal - <https://www.climateneutraldatacentre.net/>

[4] Scottish Offshore Wind to Green Hydrogen Opportunity Assessment

[5] Shortlist for data centre site development – SCOTLANDISNOW

[6] S Skerratt, J Atterton, C Hall, DI McCracken, A Renwick, C Revoredo-Giha, A Steinerowski, SG Thomson, MR Woolvin, John H Farrington, Fiona Heeson, Rural Scotland in Focus – 2012  
[https://pure.sruc.ac.uk/files/42775221/RSiF\\_lo\\_res\\_for\\_web\\_2\\_.pdf](https://pure.sruc.ac.uk/files/42775221/RSiF_lo_res_for_web_2_.pdf)

[7] SMALL TOWNS INITIATIVE: CAMPBELTOWN REPORT – Built Environment Forum Scotland (BEFS):  
<https://www.befs.org.uk/wp-content/uploads/2017/04/SMALL-TOWNS-Campbeltown-Report.pdf>

[8] National Records of Scotland – Population Projections for Scottish Areas:  
<https://scotland.shinyapps.io/nrs-sub-national-population-projections/>