



Project:	Glenfalloch Hydro Schemes
Client:	Glenfalloch Estates and Temporis Capital
Dates and duration of contract for Project:	<p>Commissioned in November 2013 to refine and develop the schemes</p> <p>Construction commenced in November 2014</p> <p>Schemes successfully completed on programme in December 2015</p>
Project Description:	<p>Two high head run of river hydro schemes, with a total installed capacity of 2.9MW, located north of Loch Lomond in the River Falloch catchment</p> <p>Derrydarroch scheme:</p> <p>Twin Gilkes Pelton turbines developing 1.95MW maximum output</p> <p>200m static head, 9km² catchment, Q50 of 300 l/s</p> <p>Five intakes, some 7km of penstocks of varying diameters 250mm to 700mm</p> <p>Upper Falloch scheme:</p> <p>A single Gilkes Turgo turbine developing 0.95MW output</p> <p>120m static head, 7km² catchment, Q50 of 400 l/s</p> <p>One intake, some 2.5km of penstock of diameter 900mm</p> <p>Private Wire cabling joins the two schemes to the local 11kV Distribution Network</p>

Natural Power Hydro Case Study



Services Provided:

Following the granting of planning consent, Natural Power was engaged to progress the schemes through to construction to meet a specific Feed In Tariff programme target

Bringing together in-house planning, hydrologic, engineering, project management and ecological management skills, Natural Power provided the following integrated services:

Hydrologic review and energy yield verification

Intrusive site investigation and topographic survey

Ecological baseline surveys and supervision during construction

FEED studies for the tracks, intakes, pipelines, several bridges, and powerhouses

Turbine and Balance of Plant contract tendering and procurement

Detailed design of all project elements

Construction supervision

Added Value:

The schemes have been developed in a National Park setting, and Natural Power successfully managed the consenting process in close liaison with the Park's Authority, providing early information on key environmental aspects such as Protected Species, deep peat management, and landscape and visual effects

A major element of the scheme included the need to construct a pipe bridge crossing of the live West Highland Line. Natural Power worked closely with Network Rail to expedite the approvals process and ensure that the bridge could be constructed on programme

A pipeline optimisation process was carried out in conjunction with the contractor and the client, balancing materials costs and timelines against installation costs and programme

Natural Power provided expert electrical engineering advice and management of the Private Wire system as well as all of the liaison with the DNO and electrical contractor to configure the interconnection of the two schemes

Contract Value - Circa £10M works value

