

CASE STUDY

TULLIEMET, Atholl Estates, Pitlochry, Scotland



KEY STATISTICS

Customer: Atholl Estates
Turbine type: HCTI Twin Jet Turgo
Number of Turbines: 1
Power (kW): 252 kW
Net Head: 63m
Flow: 534 l/s
Runner Dia: 16.5"
Speed: 750 rpm

SCOPE OF SUPPLY

Gilkes 16.5" HCTI Twin Jet Turgo Turbine.
Hydraulic actuation of spear valve & deflector
Main inlet valve (Hydraulic weight to close butterfly valve)
750 rpm induction generator.
PLC control & switchgear panel.
Head level sensor.
Installation and commissioning.
Service & maintenance contract.

The Atholl estate is typical of many Scottish estates which continue to invest in renewable technology such as hydropower to provide long term, secure and environmentally friendly incomes.

Due to the flow characteristics of Tulliemet burn (which eventually feeds in to the River Tummel just south of the SSE hydro at Pitlochry), Gilkes selected a 16.5" twin jet Turgo running at 750rpm. A Turgo turbine was selected as the machines efficiency curve maximised generation throughout the year. Working with a net head of 63m and a design flow of 534l/sec the scheme is able to contribute over 250kW to the National Grid.

Tulliemet burn is a run of river scheme, this means that the available flows change considerably depending on the time of year. As the turbine was sized to operate efficiently on flows as low as 50l/sec the scheme is able to generate in excess of 760MWh/year.

As with many Gilkes schemes, our local service centres provide scheduled support visits, which include remote access and monitoring of the sites control systems. This enables Gilkes to ensure that the turbine continuously operates at full efficiency and with a minimum of down time.

Gilkes are proud to support Atholl Estates. If you are able to visit Blair Castle in Blair Atholl, one of our smaller single jet machines can be seen as a working display. And as long as it has rained recently it is more than likely the Castle and its many attractions will be running solely on hydro power.

CONTACT

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