

Briefing Note

Developing Hydro Electric Schemes

Scotland has a favourable topography and climate for hydro power, and a proud engineering tradition for hydro schemes, both large and small. In recent years, the availability of Feed-in Tariffs for schemes with a capacity of 5 Megawatts or below has led to a growth in the number of schemes being consented and constructed. However, Feed-in Tariff rates are forecast to be reduced both in the short and medium term. Given the benefits of pre-accreditation (effectively “locking in” a feed-in tariff rate prior to the commencement of power generation) many potential schemes are currently being pushed forward, in order to capitalise on the current Feed-in Tariff rates.

This briefing note discusses several of the issues involved in the design and construction of hydro schemes, and is intended to be of benefit to landowners seeking to develop their consented scheme.

Contract Structure

With as many as six contracts operating simultaneously for hydro developments, consideration should be given to how the various contracts fit together. Procurement of materials and installation can be carried out under separate contracts or under one umbrella. Additionally, engineering and project sign-off can also usefully be carried out by one consultant. There can be benefits to projects of having the same consultants involved in different roles. Interfaces between contracts, with the potential for added costs and delays, should be carefully assessed.

Contract Terms

Numerous provisions are “up for grabs” in negotiating engineering, supply, installation, and consultancy contracts. A clear commercial approach and an eye for the small print are required in negotiations. Cost savings can be achieved if contracts set out clear responsibilities on both sides avoiding overlap or confusion between professional roles.

Track record of counterparties

Given the specialist nature of work and the often challenging terrain, the track record of consultants and contractors should be reviewed before commencement. References from previous clients should be checked, and visits to previous projects should be arranged. Clients will be best served by appointing contractors and engineers with suitable levels of experience on similar schemes.

Liaison with SEPA, the Planning Authority, etc.:

A consultant should be tasked with dealing face-to-face with SEPA in respect of the CAR Licence, and the planning authority in terms of post-consent conditions. The engineer responsible for designing the scheme should also be obliged to ensure his or her designs comply with all consents.

Design

A consultant should be obliged to act as “lead designer”. This role should ensure that any contributions to the overall project design from others are tied together to form a comprehensive and workable design solution. Problems can arise particularly on rural projects with communication between contractors and designers. The “lead design” role can provide tangible benefit to the client’s risk profile.

Project Manager

Strong project management is required for hydro projects. The task of ensuring information flows between all consultants and the contractor is critical to the success of the project. Supervision of the contractor is also vital – a well-resourced and local project manager can work effectively with the contractor, providing the client with regular and constant monitoring of materials, works, and progress toward completion.

Maintenance costs

Given the proliferation of renewable energy projects in the UK, there is competition in the market for maintenance contractors, covering many types and sizes of turbine. While the installation contractor may have greater experience, an active market has led to competition on price and scope amongst alternative contractors. A competitive tender process for the role of maintenance contractor may bring benefits for the client.

Warranties

Clients should benefit from warranties in respect of workmanship, materials, key parts, and design or several years following completion or “Take Over” of a turbine project. In addition, warranties regarding availability, turbine performance, and on noise levels should also be sought. Clients should be aware during tender discussions what warranties are available, what they cover, and for how long.

Future re-finance or sale

Landowners may seek in future to re-finance their development or sell, through either an asset or business sale. With financiers and purchasers conducting detailed due diligence over project contracts, careful consideration should be given by the client to the contractual rights available and the “integrity” of the contracts used to procure the development. A full package of contracts or collateral warranties provides tangible added value to the completed project in the competitive re-finance market or in the secondary market for completed assets.

This note is intended as a brief summary of a selection of the issues surrounding the development of hydro electric schemes. No responsibility can be taken for any action taken in reliance on this note and specialist advice should be taken in every case. Turcan Connell would be happy to provide such advice.

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