



The Association of Manufacturers and suppliers of
Power Systems and ancillary equipment

	The following is provided by AMPS as information to assist with the GC0048 CBA process associated with banding threshold deliberations.	
Product type	Overview of the Technical Specification.	Cost
Industrial	Class H Prime Rated Industrial Generator. . (ISO 8528 pt1 performance capability)	Comparative Base cost to which the identified additional % cost must be added.
RfG Band A	Must be suitable for Grid connection duty. Cont rating, Wide V & Hz operating range. Subjected to stress raising network system disturbances. This application requires a degree of de-rate along with increased inherent robustness. Enhanced control and protection system to facilitate Auto-Sync, and comply with RoCoF (likely 1Hz/s). Logic interface (input port) to cease active power output within 5secs.	Base + 15%
RfG Band B	All of Band A requirements plus: Increased Robustness to cope with FRT/LVRT events. Increased technical capability to comply with required ability to automatically reduce power on instruction. Enhanced; control schemes, protection and metering. Superior incorporated communication features to generator functions to enable the ability to: Automatically synchronise and so reconnect. Ability to provide steady state Reactive (VAr) contribution plus reactive current injection to support and so mitigate momentary system disturbing events.	Base + Band A + 15<20%*
	<i>CONTINUED.....SEE PAGE 2</i>	

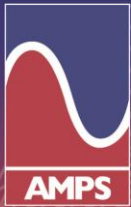
Association of Manufacturers of Power generating Systems (AMPS)

AMPS, Peershaws, Berewyk Hall Court, White Colne, Colchester, Essex CO6 2QB Tel: +44 (0) 1787 221025 Fax: +44 (0) 8453 016853

Email: lisa.dalton@amps.org.uk
Website: www.amps.org.uk

Director General/Chief Executive Paul E Blything
Company Secretary Christine Joyce

Registered Office: Association of Manufacturers of Power generating Systems (AMPS), Peershaws, Berewyk Hall Court, White Colne, Colchester, Essex CO6 2QB.
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<p>RfG Band C</p>	<p>All of Band A&B requirements plus: Further boosted technical capability to enable the generator to provide superior operational performance under dynamic control both locally and remote therefore requiring increased communication capability. Furthermore: Active power controllability. Frequency response. Support local site related generator instrumentation plus remote data monitoring. The ability for local discrimination related Automatic disconnection. Rapid re-synchronisation. Optional Black start. Stable operation across wide-range operational performance parameters. Pole slipping protection. Ramp rate limits. Undertaking the necessary Type Testing work and data gathering to enable Simulation Models to consider dynamic behaviour under network disturbances.</p>	<p>Base + Band B + 20<30%*</p> <p>* The variations are included to take into account the unknown costs associated with communication capability plus the accreditation and approvals process.</p>
<p>TABLE 1</p>		

The above incremental differences are offered as typical. Concerns and unknowns regarding the route for achieving compliance accreditation and identification of the required communication protocol are considered a barrier to final costings of an RfG compliant generator.

Submitted by: Chris Whitworth, AMPS Technical Specialist

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