CLAIMS:

1. A method of controlling power provided by a generator to an end system via a frequency converter, the method comprising:

monitoring the power produced by the generator;

diverting, in response to said monitored power exceeding a threshold level, at least some of the power from the output of said generator to an auxiliary system;

charging at least one energy storage device with said diverted power;

delivering, in response to said monitored power being below a threshold level, power to said end system from said auxiliary system by discharging said at least one energy storage device,

wherein said diverting involves diverting said at least some power away from an input of said frequency converter,

and wherein said method further includes causing said auxiliary system to absorb reactive power from said generator during said diverting of power from said generator.

2. A method as claimed in claim 1, further including controlling said diverting and delivering of power to maintain the power delivered to said end system within a desired power level band, preferaby at a desired mean power level.

3. A method as claimed in any preceeding claim, wherein said diverting and delivering of power is performed in response to variations in power produced directly by said generator.

4. A method as claimed in any preceding claim, wherein said diverting involves diverting at least some of the power produced directly by said generator.

5. A method as claimed in any preceding claim, wherein said generator is a single generator, said monitoring and diverting being performed in respect of said single generator.

6. A method as claimed in any preceding claim, wherein said generator comprises a turbine generator for generating power in response to flow of a driving fuid, and wherein said diverting and said delivering are performed in response to variations in power generated by said generator as a result of fluctuations in the rate of flow of said driving fluid.

7. A method as claimed in any preceding claim, wherein said diverting and said delivering are performed in response to variations in said generator power detected over a period of between 1 second and 60 seconds, or a period of between 1 minute and 10 minutes.

8. A method as claimed in claim 7, wherein said delivering involves delivering power from the auxiliary system to the input of said frequency converter.

9. A method as claimed in claim 7 or 8, wherein said delivering involves delivering power from the auxiliary system to an output of said frequency converter.

10. A method as claimed in claim 9, wherein said frequency converter provides power to said end system via a transformer, wherein said delivering involves delivering power from said auxiliary system to the same side of said transformer as said frequency converter.

11. A method as claimed in claim 10, wherein said delivering involves delivering power from said auxiliary system to the same winding of said transformer as said frequency converter or to a separate winding of said transformer to said frequency converter.

12. A method as claimed in claim 7 or 8, wherein said delivering involves delivering power from the auxiliary system to an intermediate section of said frequency converter.

13. A method as claimed in any preceding claim, wherein said causing said auxiliary system to absorb reactive power from said generator during said diverting of power from said generator involves configuring said auxiliary system to provide a reactive load to said generator output during said diverting of power from said generator.

14. A power generation system comprising a generator coupled to an end system via a frequency converter, the generator also being coupled to an auxiliary system comprising at least one energy storage device, the system further including:

monitoring means for monitoring the power produced by the generator;

diverting means for diverting, in response to said monitored power exceeding a threshold level, at least some of the power from the output of said generator to said auxiliary system;

charging means for charging said at least one energy storage device with said diverted power;

and delivering means for delivering, in response to said monitored power being below a threshold level, power to said end system from said auxiliary system by discharging said at least one energy storage device'

wherein said diverting means is configured to divert said at least some power away from an input of said frequency converter,

and wherein saidauxiliary system is configured to absorb reactive power from said generator during said diverting of power from said generator.

15. The system of claim 14, wherein said auxiliary system is selectably connectable directly or indirectly to the output of said generator by a switching device.

16. The system of claim 14 or 15, wherein the auxiliary system comprises one or more inductors or other inductive load.

17. The system of any one of claims 14 to 16, wherein the auxiliary system comprises means for charging said at least one energy storage device.

18. The system of claim 17, wherein said charging means comprises an AC to DC converter.