



Professional Affiliate of the
Engineering Council UK

Operational Report Return Form : Guidance Notes

General Comments

These notes are intended as guidance to assist in the completion of the IDGTE Operational Report spreadsheet. The Operational Report is intended to provide useful guidance and benchmark performance indices to users of diesel and gas turbine plant worldwide. As such, it relies upon the contributions of users to ensure it is both comprehensive and statistically valid. We hope that you will be able to participate in the compilation of this report, and that you will find the output to be useful and interesting.

Please feel free to recommend this to relevant colleagues, and to circulate these documents to other possible contributors. As with any benchmarking exercise, the more contributors then the better the outcome. All valid contributors will naturally receive a copy of the final report.

Please provide as much data as you are able to. If you are unable to provide all of the data requested, then please provide as much as possible – part completed returns are clearly better than none at all.

If you have any queries on the data requested, or any other aspect of the Operational Report then please contact either the IDGTE office or the Chairman of the IDGTE Operational Report Group, at the addresses below :

IDGTE Office :

enquiries@idgte.org

Tel. +44 (0) 1234 214340

Fax. +44 (0) 1234 355493

Chairman of the Operational Report Group :

tom.woodford@electricity.gg

Tel. +44 (0) 1481 241953

Fax. +44 (0) 1481 241914

We would be pleased to receive completed return forms to either of the email addresses above by 18th September 2009.

Company Data Worksheet

Company and Contact Details :

Please enter the name, address and contact details for your organisation. This information will be used by IDGTE for our own records, and will be published in the Operational Report unless you prefer your contribution to be anonymous.

Confidentiality :

If you require that your company details are not published with your operational data then please state “**YES**” in the box in the “Confidentiality” section. If you do so, then your company details will be withheld from the published report, and you will be assigned a reference number only. You will, of course, be advised what your own reference number is.

Reporting Period :

Please provide the start/finish dates for the 12 month period to which the data refers. This can be a calendar year, or a financial or technical 12 month reporting period, to the preference of the contributor.

We would ideally prefer to receive three years of data, to enable some history to be built up. In future, only the latest year would be needed from regular contributors.

Please provide a separate spreadsheet for each 12 month period provided.

Fuels Used :

If you have average fuel properties available then please provide them. These may be from your own analysis, or your fuel suppliers. If you do not have this information, then we will use a nominal average value for each fuel type.

Engine efficiency calculations are typically based upon metered fuel consumption at 15°. If the fuel is metered at a higher temperature than this, there is normally a correction factor applied. If your fuel consumption is not corrected to 15° then please advise the temperature at which it is metered, and we will apply a correction.

Operations and Staff Numbers :

This section is intended to provide a high level analysis of the number of Operations and Maintenance staff as compared to the operating duty of the station. Please feel free to provide further information or explanatory notes if this may assist with this.

Engine Data Worksheet

General Engine Parameters :

Please provide as much information as you are able to for your engines. If you do not wish to declare specific engine manufacturers/types, then please provide a generic designation (for example, slow-speed 2-stroke, medium-speed 4-stroke etc.).

The “Set Number” is your own designation.

Outage Hours, Availability and Reliability :

Unplanned/forced outage is where the plant either shutdown of its own accord, or could not safely have been left running for a period of more than one hour after discovery of the problem.

Unplanned/forced outages contribute to the engine reliability indicator.

Planned R&M hours is plant outages for scheduled work – either routine planned maintenance or repairs that can safely be scheduled for a convenient time.

Planned R&M plus forced outage hours contribute to the engine availability indicator.

Plant Utilisation and Load Factor :

These parameters are an indication of plant utilisation based upon total MWh generated.

Generation from Heat Recovery and Auxiliaries Consumption :

Where additional generation from heat recovery is installed (e.g. steam turbine generation from exhaust gas boilers) then please indicate this separately to output from the main generator itself. If heat recovery generation is shared between engines, then please indicate this or apportion to individual engines in the most appropriate way.

If the generator output does not account for all generator parasitic electrical auxiliaries consumption, then please provide the auxiliaries consumption. If auxiliaries consumption is not accurately metered then please provide an estimate. Auxiliaries consumption is for each individual generator itself, and not for station or site “common” auxiliaries.

The intention of these parameters is to establish the net efficiency of the generating set itself, after allowing for its own parasitic auxiliaries consumption. Net efficiency also including heat recovery generation is calculated separately.

Gas Turbine Data Worksheet

General Parameters :

Please provide as much information as you are able to for your plant. If you do not wish to declare specific manufacturers/types, then please provide a generic designation (for example, simple cycle standby GT etc.).

The “Set Number” is your own designation.

Outage Hours, Availability and Reliability :

Unplanned/forced outage is where the plant either shutdown of its own accord, or could not safely have been left running for a period of more than one hour after discovery of the problem.

Unplanned/forced outages contribute to the plant reliability indicator.

Planned R&M hours is plant outages for scheduled work – either routine planned maintenance or repairs that can safely be scheduled for a convenient time.

Planned R&M plus forced outage hours contribute to the plant availability indicator.

Plant Utilisation and Load Factor :

These parameters are an indication of plant utilisation based upon total MWh generated.

Generation from Heat Recovery and Auxiliaries Consumption :

Where additional generation from heat recovery is installed (e.g. combined cycle plants) then please indicate this separately to output from the main generator itself. If heat recovery generation is shared between gas turbines, then please indicate this or apportion to individual plant in the most appropriate way.

If the generator output does not account for all generator parasitic electrical auxiliaries consumption, then please provide the auxiliaries consumption. If auxiliaries consumption is not accurately metered then please provide an estimate. Auxiliaries consumption is for each individual generator itself, and not for station or site “common” auxiliaries.

The intention of these parameters is to establish the net efficiency of the generating set itself, after allowing for its own parasitic auxiliaries consumption. Net efficiency also including heat recovery generation is calculated separately.

Forced Outages :

If possible, please provide a list of forced outages for your plant. There is a drop-down list for the “Cause of Outage” column allowing outages to be grouped under major categories. If your outage does not fall within any of these, please use the “Others” and add a description in the “Comments” column.

The drop-down list is different for diesel engines and gas turbines.

This section is intended to highlight any particular and ongoing trends or problem areas affecting the reliability of the equipment. Please feel free to add any further relevant information in the “Comments” column.