

The Generating Availability Data System Process

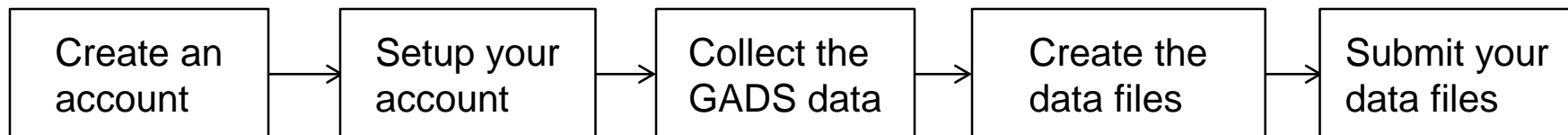
Data Reporting Instructions (DRI)

Module 12 - GADS Data Reporting Workshops
June, 2019

RELIABILITY | ACCOUNTABILITY



- Below is a high level overview of the GADS process



- The basics of each step

- Create an account - Work with your regional rep and NERC. Done once in webE-GADS
- Setup your account – Work with your regional rep and NERC. Done once then updated as needed/annually for changes in company, unit, or data reporter status in webE-GADS
- Collect the GADS data - ongoing every day using webE-GADS, commercial GADS software, or custom in-house GADS software
- Create the data files - ongoing every month/quarter in your GADS software
- Submit your data files - ongoing every month/quarter in webE-GADS

- Use this form
 - https://www.nerc.com/pa/RAPA/gads/GADS%20FAQ/Instructions_for_OA_TI_account_IE.pdf.
- Acquire a digital certificate from OATI
 - Go through your company's Information Security Officer to get the certificate
 - Install it on your PC
 - Configure it in Internet Explorer - no other browser is compatible
- To create an account in webE-GADS
 - Setup a webCARES account in the OATI NERC webPortal
 - Complete and send in the "webPortal Registered Entity User Admin Registration Form"
 - Select the NERC product "webE-GADS"
 - NERC will work with OATI to create your account

- To setup your account in webE-GADS
 - Fill in the “OATI account” contact information for your company
 - If you are the data reporter fill in your contact information
 - If you select a Delegated Reporting Entity to report your data, fill in their contact information
 - Fill in your company information
 - If needed, set up units
 - You will need to fill in the nine required design data fields for each unit
 - webE-GADS requires that you
 - Validate the data for contact, company, and units annually
 - Update the data for contact, company, and units whenever they change

- To collect the GADS data
 - Use a software package like MicroGADS, Open Source GADS, PowerGADS, webE-GADS, or a custom package, to store and validate your GADS data
 - Form the daily habit of reviewing the control room log books for event information to identify the system, component, and cause for each event
 - Make it a work goal to try and complete the event entries for yesterday by COB today in your GADS data collection system to keep the information fresh
 - Mondays, long weekends, holidays, and vacations will require a catch-up effort to bring forward so don't put this task off
 - Don't wait till the end of the month to collect the event data as it will be harder to get and less accurate
 - Identify the SCADA systems or reports that record the performance data
 - Fuels burned, generation, installed capacity
 - Work with your IT department to create software interfaces for the fuel and generation performance data to automate its collection

NAVIGANT'S GLOBAL GENERATION SERVICES

Global Generation Services Focuses on Three Major Area of Focus:

- **Generation Data**

- Generation Knowledge Service (GKS)
 - Fossil, Hydro and Wind benchmarking
 - More than 450 GW's of capacity in the database
 - Mix of international units
- MicroGADS
 - Meets IEEE international standards
 - Allows for reliability/availability analysis
 - Easy reporting to GKS

- **Generation Performance**

- Cost/Performance benchmarking
- Staffing and organizational analysis
- Operational and process review
- Best practice/performance improvement

- **Asset Management**

- Decision/real option analysis
 - o Fleet asset mix strategies
 - o Capital investment decision/prioritization

- The procedure for creating the event and performance data files in 05/07 format files for submission to webE-GADS will depend on the software you are using
 - In general your data will have to pass two levels of error checking first
 - Level 1 - front end error checking
 - Validates the event and performance data as you enter it on screen to ensure
 - That you only use approved values for the various codes, et cetera
 - That you enter all the required data fields
 - Level 2 - whole month error checking
 - Validates all of the data you have entered at a higher level to ensure
 - That all of the data balances out month by month
 - Then you have to run the function that creates the 05/07 files
 - Consult your software manual for this information
 - Once created, you may have to manually edit and/or copy the files to
 - Include features that are unsupported by your software such as a dominant derate code
 - Modify events for an ISO GADS filing (ISO GADS is covered in Appendix M)
 - You will have to know the format of the files to edit them

- To submit your data files
 - Login to webE-GADS
 - Go to the Data > Import screen
 - Type in the locations of your Performance – 05 and Event -07 files
 - Press import
 - Deal with any import errors
 - Log out
 - webE-GADS requires time to process your data so wait a few hours
 - Login to webE-GADS again
 - Go to the Checklist screen
 - Validate your data import one quarter at a time
 - Deal with any validation errors
 - When both files are fully validated you are done

- Problem: You have mastered the GADS process and are ready to start entering your data.
- Question: During which step in the GADS process will you need to enter the required design data?
 - A. Step 1 – Create An Account
 - B. Step 2 – Setup Your Account
 - C. Step 3 – Collect The GADS Data
 - D. Step 4 – Create The Data Files
 - E. Step 5 – Submit The Data Files
- Answer: B. Step 2 – Setup Your Account
- Explanation: One part of setting up your account is to setup your units and you will need their required design data to do that

- webE-GADS performs high level checks on the performance data using a factor called the MW Multiplier that can produce warnings you should never ignore. Some typical checks:
 - Gross Maximum Capacity MW \leq Nameplate Rating * (1 + MW Multiplier)
 - NAG \leq ((NMC + 1) * Service Hours * (1 + MW Multiplier))
 - If you get one of these warnings there is something seriously wrong with your data

Unit Type	Unit Code Range	MW Mult
Combined Cycle GT units	300-399, 700-799	0.20
Combined Cycle ST units	100-199, 600-649	0.20
CoGeneration GT units	300-399, 700-799	0.20
CoGeneration ST units	100-199, 600-649	0.20
CoGeneration Block	800-899	0.10
Combined Cycle Block	800-899	0.15
Fluidized Bed	650-699	0.10
Fossil-Steam	100-199, 600-649	0.30
Gas Turbine/Jet Engine (Simple Cycle Operation)	300-399, 700-799	0.30
Geothermal	800-899	0.10
Internal Combustion/Reciprocating Engines	400-499	0.10
Miscellaneous	800-899	0.10
Multi-boiler/Multi-turbine	800-899	0.10
Nuclear	200-299	0.10
Pumped Storage/Hydro	500-599, 900-999	0.50

- NERC GADS web page:
 - [https://www.nerc.com/pa/RAPA/gads/Pages/GeneratingAvailabilityDataSystem-\(GADS\).aspx](https://www.nerc.com/pa/RAPA/gads/Pages/GeneratingAvailabilityDataSystem-(GADS).aspx)
- Data Reporting Instructions (DRI) and reporting templates:
 - <https://www.nerc.com/pa/RAPA/gads/Pages/Data%20Reporting%20Instructions.aspx>
- Frequently Asked Questions (FAQs):
 - <https://www.nerc.com/pa/RAPA/gads/Pages/GADS-FAQ.aspx>
- Training page:
 - <https://www.nerc.com/pa/RAPA/gads/Pages/Training.aspx>
- GADS Working Group web page:
 - [http://www.nerc.com/comm/PC/Pages/Generating-Availability-Data-System-Working-Group-\(GADSWG\)-2013.aspx](http://www.nerc.com/comm/PC/Pages/Generating-Availability-Data-System-Working-Group-(GADSWG)-2013.aspx)



Questions and Answers