

Objectives of the GENQEC Kw Tool

- Ease and convenience for GENQEC model users
- Standardize the practice on Kw parameter of GENQEC model
- Potential of data analysis for future generator model developments

Targeted Users of the GENQEC Kw Tool

- Generator owners performing generator parameter validations
- Consultants providing generator parameters validation services
- Planners/operators with SCADA/RTU data for improving model quality

Pre-requisite of GENQEC Kw Tool

Generator and Model Data

MVA base, Voltage base, X_l , X_q , $S_{1.0}$, $S_{1.2}$, R_a (optional, 0)

Generator Online measurement Data

V_t , P , Q , I_{fd}

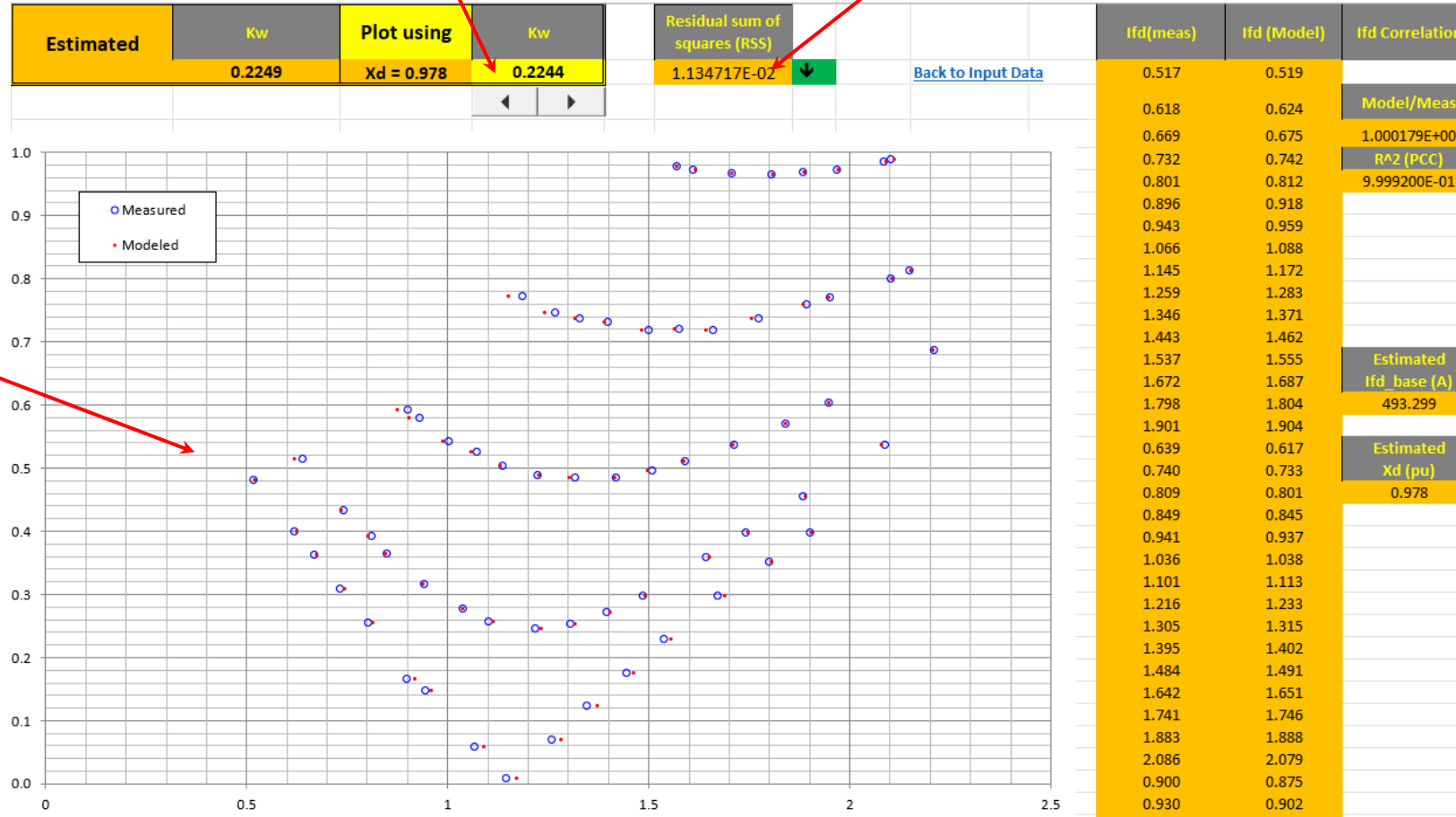
GENQEC Kw Tool Live Demo

- A macro-enabled Microsoft Excel file
- Optimal results using all the measurement data provided
- Capable of working with data from various type of sources
- Tool integrity check for consistency of the results

GENQEC Kw Tool Outputs

Adjustable Kw for fine tuning

Residual sum of squares (RSS)



Visual comparison between measured and modeled field current

Measured/modeled Linearity, ideally 1

Measured/modeled correlation, ideally 1

Field Current base

X_d

GENQEC Kw Tool Package

- A macro-enabled Microsoft Excel file
- SHA1 hash result for the Excel file above

Windows command line:

Certutil -hashfile "GENQEC Kw Tool V1.0.xlsm" SHA1

- Example data files for 3 generators

Note: The save function of the macro-enabled file has been modified to prevent modifications to the Tool itself. Results are **saved as** separate file(s) from the Tool.

