Using the Model Catalog Feature in GT MASTER and THERMOFLEX
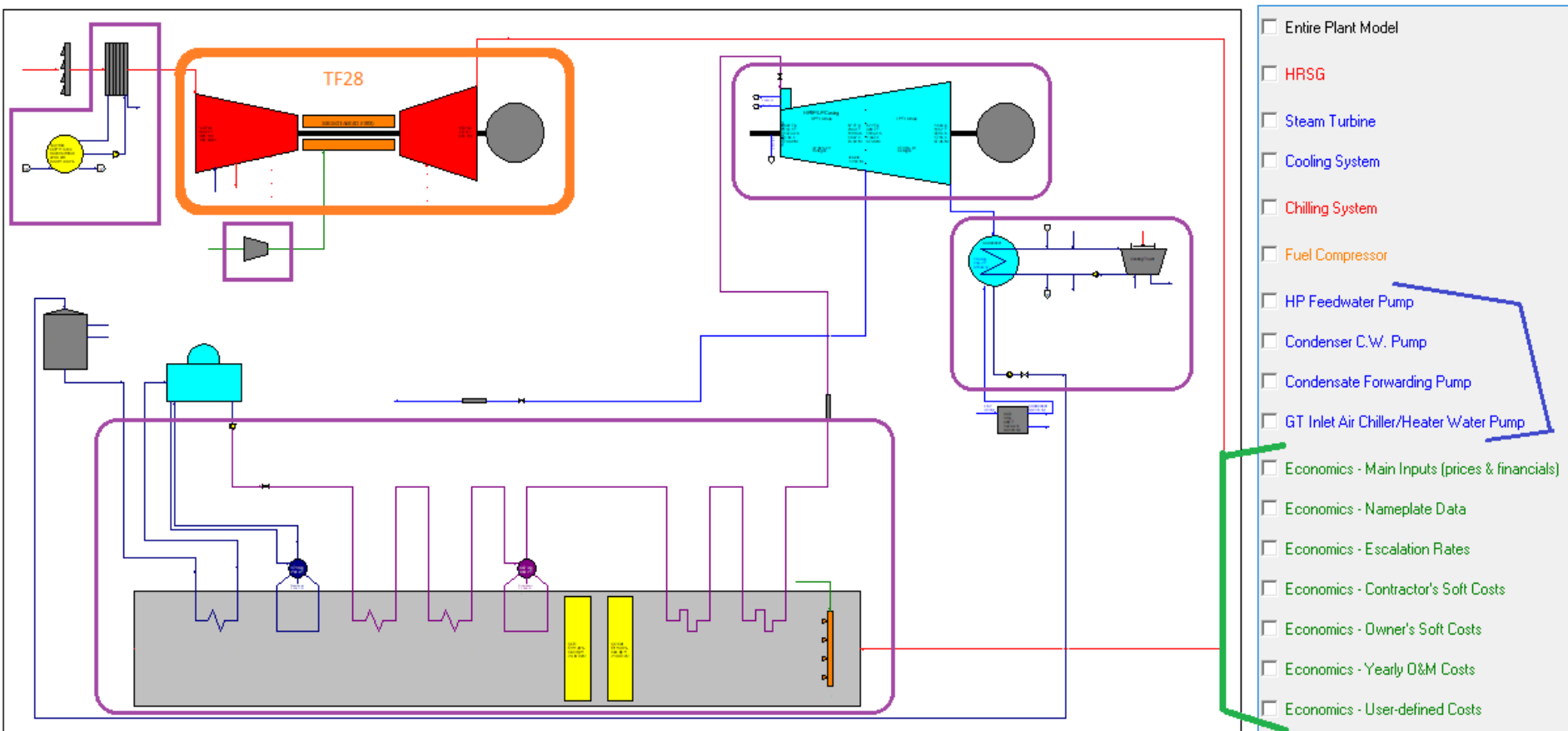
Model Catalogs (the 5 W's)

- **Who:** Users of GT MASTER & THERMOFLEX (with or without PEACE)

- **What:** Method to store model components in a catalog (repository) so they may be reused in other models, and shared with other users.

- **Where:** GT MASTER – off-design simulation partner to GT PRO. THERMOFLEX – fully flexible modeling environment with > 220 standard built-in components handling 7 fluid types

- **When:** GT MASTER v26.1, THERMOFLEX v27

- **Why?**
  - Provides engineers a convenient system to organize work product (time, effort, $) for reuse in other situations.
  - Provides OEMs a simple way to publish reference plants and/or tuned component models for use in Thermoflow programs by thousands of power engineers, customers, and would-be customers.

Catalog Mechanics

- Catalog Files
  - Located by default in the [`Catalog`] folder under your "MYFILES" folder
  - Files may be stored in shared location for multi-user access
- GT MASTER
  - Store items in a catalog from VIEW OUTPUTS (computed)
  - Retrieve items from catalog from EDIT INPUTS
- THERMOFLEX
  - Store items in a catalog from VIEW OUTPUTS (computed)
  - Retrieve model _items_ from catalog in EDIT DRAWING
  - Retrieve model _data_ from catalog in EDIT INPUTS
- Manage Catalogs
  - from any view since catalogs unconnected from current model

GT MASTER – What can be cataloged?

- [ ] Entire Plant Model
- [ ] HRSG
- [ ] Steam Turbine
- [ ] Cooling System
- [ ] Chilling System
- [ ] Fuel Compressor
- [ ] HP Feedwater Pump
- [ ] Condenser C.W. Pump
- [ ] Condensate Forwarding Pump
- [ ] GT Inlet Air Chiller/Heater Water Pump
- [ ] Economics - Main Inputs (prices & financials)
- [ ] Economics - Nameplate Data
- [ ] Economics - Escalation Rates
- [ ] Economics - Contractor's Soft Costs
- [ ] Economics - Owner's Soft Costs
- [ ] Economics - Yearly O&M Costs
- [ ] Economics - User-defined Costs

GT MASTER Import Rules

- Can swap with "compatible" components
  - HRSGs *(e.g. Type 2 & Type 6 are "compatible")*
  - STs *(same cycle type & shaft arrangement SS-MS)*
  - Condensing systems *(types interchangeable impact on ST design up to you)*
  - Pumps, Fuel Compressors, Economics – flexible
  - Cataloged model version <= Current model's version

- Can import chilling system into plant without one

- Import messages used to indicate if items seem too dissimilar
  - e.g. ST group nozzle areas +/-35%
  - e.g. Condenser areas +/-50% (same type)
  - e.g. Condenser nominal steam flow +/-25% (dissimilar types)
  - e.g. Chiller compares nominal GT airflow +/-25%

- Ultimately, pay attention to GT MASTER outputs & capacity messages, shown after computation is complete, to help decide if imported items are truly incompatible, or if other modifications are needed

THERMOFLEX – What can be cataloged?

website: www.Thermoflow.ir
Telegram: @Thermoflow_users

Individual Icons
User-defined icon groups
PowerDraw & Other Embellishments