



# HOURLY ANALYSIS PROGRAM 5.11 NEW FEATURES GUIDE

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# Contents

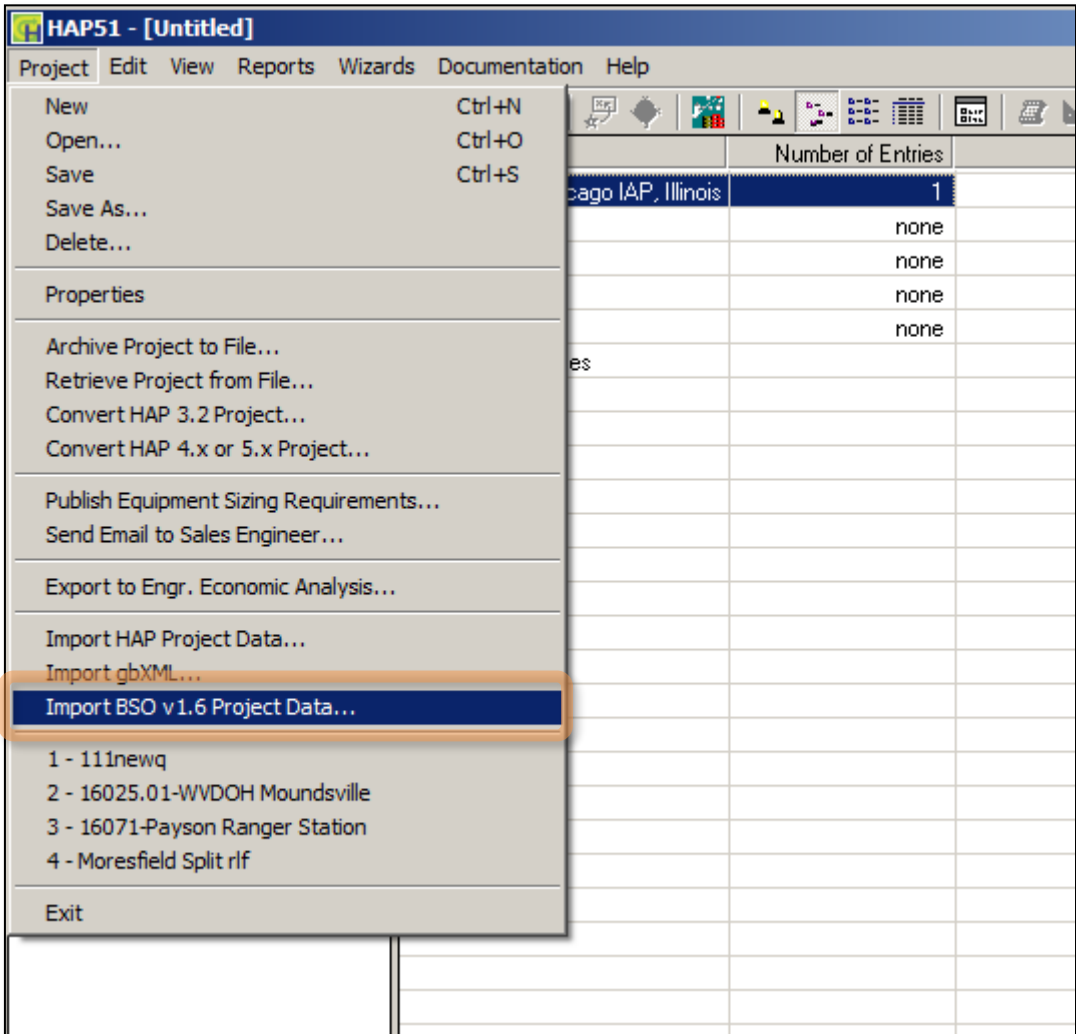
US EIA Gas & Electric Prices

Import from Building System  
Optimizer 1.60

Problem Fixes

# Building System Optimizer Import

*Details: The import projects feature has been updated to import BSO 1.60. The release of BSO 1.60 coincides with the release of HAP 5.11.*



# Updated EIA Electric and Gas Prices for the US

**Details:** Energy Information Administration (EIA) prices for electricity and natural gas includes the latest data (2016 calendar year). Statewide average commercial sector prices are provided for each US state.

The screenshot shows the 'Utility Rate Properties' dialog box. On the left is a vertical sidebar with icons for 'Weather', 'Building', 'Equipment', and 'Utility Rates'. The 'Utility Rates' icon is highlighted with a green box, and a red arrow points from it to the main dialog. The main dialog has two tabs: 'Electric Rate' and 'Fuel Rates'. The 'Electric Rate' tab is active, showing a dropdown menu for 'Rate Name' with 'Indiana - EIA 2016' selected. To the right of this are input fields for 'Energy Charge' (0.10010 \$/kWh), 'Demand Charge' (0.00000 \$/kW), and 'CO2e Emissions' (1.670 lb/kWh). The 'Fuel Rates' tab is also visible, showing a dropdown for 'Rate Name' with 'Indiana - EIA 2016' selected, and input fields for 'Units of Measure' (MCF), 'Conversion Factor' (1000.00000 kBTU/MCF), 'Price' (6.55000 \$/MCF), and 'CO2e Emissions' (123.000 lb/MCF). There are also checkboxes for 'Natural Gas' (checked), 'Fuel Oil', and 'Propane'. At the bottom right of the dialog are 'Help', 'Finish', and 'Cancel' buttons.

# Bugs / Corrections

- a) **System Sizing I** - If a single duct VAV system was configured with VAV reheat terminals, and the minimum airflow for those terminals was specified as "% of supply air", in certain cases the minimum zone airflow reported was too small. *If you have a HAP 5.10 project with air systems affected by this problem, the systems must be recalculated in 5.11 to eliminate the problem.*
- b) **System Sizing II** - The "VRF Outdoor Unit Sizing Data" table on the Zone Sizing Summary report listed incorrect cooling values in certain situations. *If you have a HAP 5.10 project with VRF systems affected by this problem, the systems must be recalculated in 5.11 to eliminate the problem.*
- c) **System Sizing III** - The Air System Hourly Design Day Cooling Loads report incorrectly omitted data for terminal heating coil loads. This includes loads for heating coils in reheat terminals and in fan coil or WSHP units. This heating coil data was correctly calculated and was shown on other design reports. It was only omitted on this particular report.
- d) **Building Wizard** - When the Building Wizard was used to generate spaces and ASHRAE 90.1 schedules were selected in the Wizard, the generated schedules were incorrect. For occupants this affected all building types except "assembly". For lighting and electric equipment this affected all building types.
- e) **Building Simulation** - On the LEED v4 and LEED 2009 Summary reports, in the "Performance Rating Energy Consumption and Cost by Fuel Type" table, the Site Energy Use Percent Savings total value was incorrect when running in SI/metric units.
- f) **Space Input** - The ventilation standard shown at the bottom of the General tab incorrectly showed Standard 62.1-2010 for a very specific situation. The effect of the error is largely cosmetic since 62.1-2010 and 62.1-2013 have essentially the same space usage types, and ventilation airflow requirements.
- g) **gbXML Import** - When importing a gbXML file that defined multiple window assemblies, only the last of the window assemblies was imported into HAP.
- h) **Calculation Status Window** - Air system simulation calculations failed with an "Error 6: Overflow" error for a specific situation. This error occurred in the calculation status window that appears while calculations are running, and only occurred when an air system contained an unusually large number of spaces. For example, a system serving 3000 spaces would trigger the error.

# QUESTIONS?

*If you have any questions please contact Carrier Software Systems at*

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***Thank you!***