![Morrison Hershfield logo]

BUILDING PERFORMANCE SOLUTIONS

Innovation in Energy Simulation

Morrison Hershfield has fully harnessed the potential of energy simulations towards creating greater opportunity for driving energy efficiency in the built environment. Through a combination of industry recognized Energy Engineers, best-in-class software in EnergyPlus, and innovation in data visualization, Morrison Hershfield has developed a remarkable building energy optimization tool called Building Energy Performance Mapping.

Parametric simulations help manage the risk and sensitivity of early design decisions.

The tool leverages the results of large-scale parametric energy simulations, where building design inputs and performance outputs are project specific and completely customizable, and provides a dynamic interface to instantly assess the impact of decisions. In a typical design setting, decisions on design options impacting energy efficiency are accomplished in one meeting compared to months using status quo tools and processes. And through its optimization feature, it can identify a range of design options pre-determined to meeting a project's energy objective, providing design teams and clients with greater flexibility in design, while still meeting energy targets.

Dynamic visualizations help teams explore options fully, collaboratively, and efficiently.

A key feature of the Building Energy Performance Map, which is crucial on projects with competing performance interests (ex. energy versus energy cost versus GHG emissions, etc.), is that it allows the user to simultaneously see the impact of design solutions on multiple performance criteria. When used in developing energy policy, this feature readily identifies loop holes or inconsistent outcomes that may be present in energy code requirements.
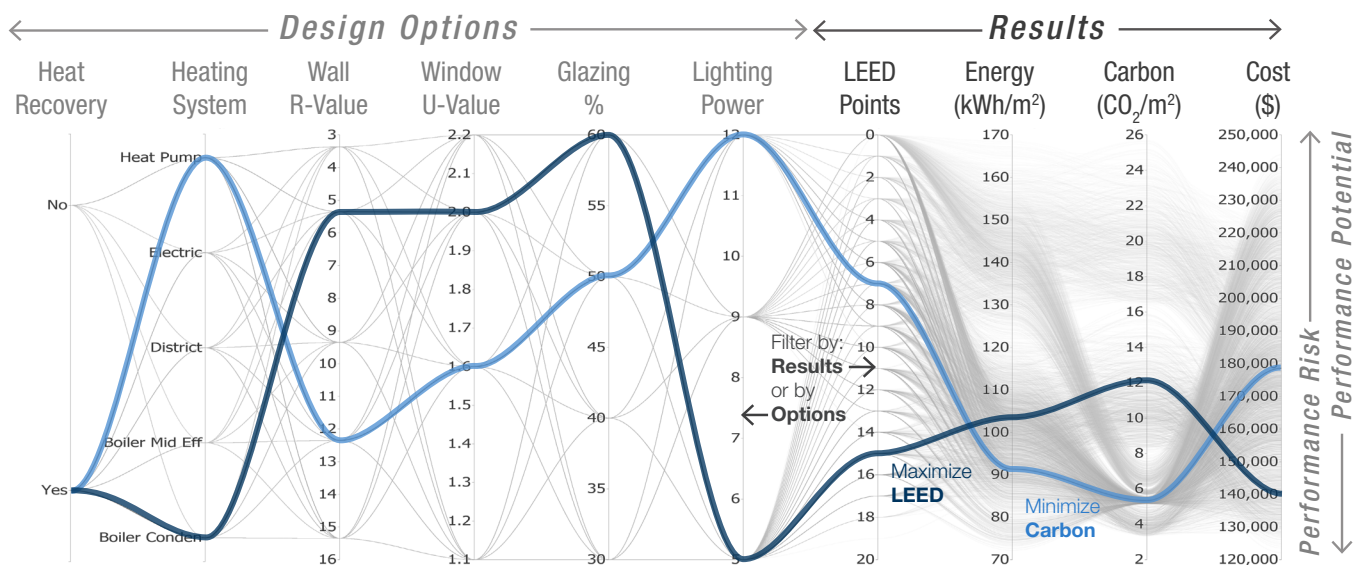

Figure 2 Building Performance Map effectively communicates design criteria alongside simulation results to architects, engineers, owners, and policy makers. Two discrete simulations (design option scenarios) have been highlighted in blue showing relative performance in the context of thousands of other possibilities.