

# BEST

## Building Envelope Energy Systems Trade-offs

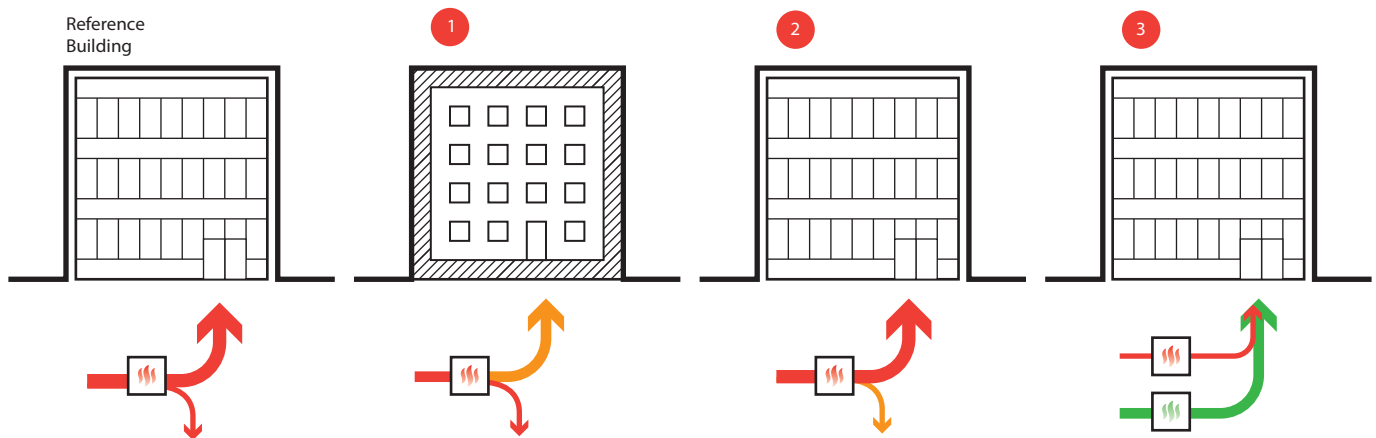
Governments at all levels are introducing more aggressive building codes and standards aimed at lowering carbon emissions from new buildings. Many of these modernized codes and standards, like Vancouver's Zero Emission Building Plan, allow for alternative compliance pathways to satisfy carbon requirements. You can focus on the building envelope, or focus on the energy system.

This creates a design question - how do strike the right balance between building envelope and building energy systems? What are the impacts of focusing on one or the other? Where is the 'sweet spot' for your particular project? BEST Advisory will help you answer these concept level design questions.

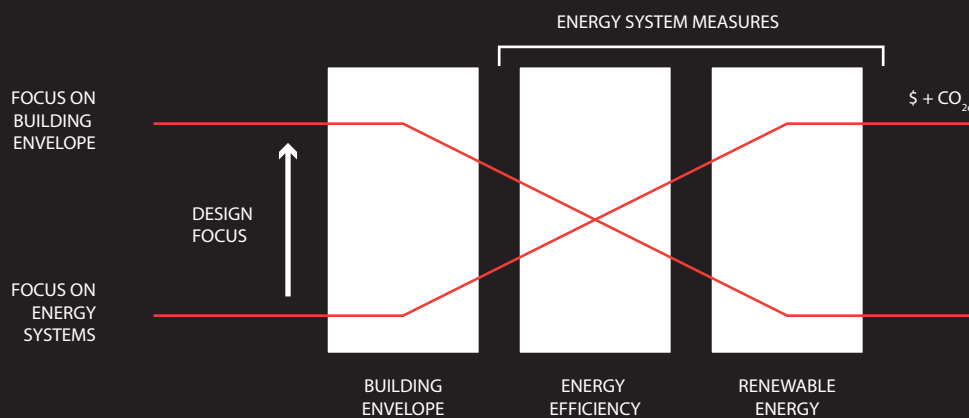


Reshape Strategies and Morrison Hershfield are opinion leaders in this field. We have helped inform many of these carbon based, alternate compliance path codes and standards. We have a wealth of information on actual costs and performance from past projects to help inform your concept design decisions for your specific project. We are experts at communicating complex problems into an easy to understand framework. We have a culture of system level thinking and are agnostics on pathways to achieve carbon outcomes. We are ready to help you understand the trade-offs for the different options you have available, and provide you with a BEST Roadmap © for you to identify the right path for your project.

There are only three ways to reduce carbon emissions in buildings. 1. Use less energy (focus on building better envelopes); 2. Use primary energy sources more efficiently (focusing on energy system efficiency); 3. Use more renewable energy (focus the type of primary energy used in the energy system).



There are many different envelope and energy system combinations which can satisfy these new, alternative compliance path codes. Each pathway will influence the upfront and ongoing building costs. Each pathway will have a particular carbon outcome. The different pathways will also have an impact on the building form and aesthetics, as well as complexity to design, construct and operate. Each pathway will determine the building's exposure to future energy and carbon prices, and it will influence the building's green building certification strategy.



Reshape Strategies and Morrison Herschfield will provide you with a BEST Roadmap © to guide you and your design team through the trade-offs so that you can optimize the goals of your project.



For more information, please contact:



BEST Advisory is a partnership between Reshape Strategies and Morrison Hershfield.