

The Governor's Energy Office **High Performance Building Program** aims to:

Maximize energy efficiency and renewable energy potential in your new construction and major renovation projects.

Increase the value of the built environment in Colorado communities through integrating planning, funding, design, construction, operations and maintenance.

Establish Colorado as an energy leader.

Create energy champions across the state.

Provide workshops, training and the development of tools and best practices.

Guide High Performance Building Project Partners in achieving high performance certification.

Synthesize the efforts of state agencies and local governments, public school districts, and allied organizations.



The integrative high performance building process drives the value of the built environment in Colorado communities through interaction at every phase: planning, funding, design, construction, operations and maintenance.

The GEO's High Performance Building Program works to combine the efforts of state agencies, local governments and public school districts in implementing energy efficiency and green building policies to ensure that local communities are enjoying the benefits of the New Energy Economy: long term energy savings, lower energy costs and economic development.

"The mission of the Governor's Energy Office is to lead Colorado to a New Energy Economy by advancing energy efficiency and renewable, clean energy resources."



*Governor's*  
**Energy Office**

**illuminating**  
the process of high  
performance building

**For public buildings:**  
New construction  
Major renovations

[www.colorado.gov/energy](http://www.colorado.gov/energy)



## Governor's Energy Office

### high performance building

High Performance Building strives to reduce energy use, optimize the use of local resources, adapt to specific climates, minimize overall resource consumption, lower operations and maintenance costs, and promote inhabitant health and satisfaction.

The integrated loop of the anamlema—the sun's yearly path across the sky—illustrates the interconnection of all phases of high performance building.

maximize resources and create opportunities by:

**Investing** in research and analysis early to create the highest performing building possible.

**Selecting** a comprehensive project team with diverse, informed and involved stakeholders.

#### ● planning

**Creating** a capable design and construction team.

**Setting** up-front goals to guide team choices.

**Fostering** value-based decision making by weighing life cycle operational savings against up front construction costs.

**Identifying** funding such as utility rebates, grants, tax incentives and low interest loans to actively shape the project budget.

**Optimizing** daylighting, passive heating and cooling, as well as other opportunities through site selection.

**Committing** to building rating certification, commissioning, and energy modeling.

The GEO can help by providing:

- Case studies that illustrate Colorado-specific projects.
- Metrics for energy targets.
- Sustainable design benchmarks.
- Team selection guidelines.
- Request for Proposal (RFP) templates.
- Charrette training and workshops.
- GEO Project Partner support.

pursue traditional and new funding sources to:

**Identify** savings opportunities early so they can positively impact your budget and project approach.

**Realize** how funding and incentive program requirements can affect project scope and design choices.

#### ● funding

**Define** funding and cost saving opportunities, which include:

- Grants offered by private and public entities.
- Federal tax incentives.
- Life cycle cost analysis evaluating long-term operational savings—apply savings to construction costs.
- Utility rebates and incentives.
- The GEO's Performance Contracting Program.
- Government and non-profit programs, such as Colorado Department of Education (CDE) and Department of Local Affairs (DOLA) services.

The GEO can help by providing:

- Bond writing templates.
- Grant writing templates.
- Life cycle cost analysis tools.
- Workshops about funding opportunities and life cycle cost analysis concepts.
- GEO Project Partner support.

achieve high performance and low energy use by:

**Using** passive solar strategies, orienting the building to the sun's path, and understanding how building orientation affects envelope selection, daylighting, shading, and mechanical system sizing.

**Responding** to regional climate realities for successful and efficient design solutions.

**Acknowledging** that each design choice, and building component impacts other components.

#### ● design

**Understanding** the true consequences of design trade-offs; help quantify and predict performance through energy and daylight modeling.

**Maximizing** the use of local resources and site specific opportunities to contribute to job creation and community development.

**Outlining** goals and maintaining proper documentation throughout the project to obtain third party building certification.

The GEO can help by providing:

- Charrette guidance.
- Integrated design workshops.
- Integrated design presentations to decision makers.
- Building rating tools.
- Information about existing sustainability guidelines and specifications.
- GEO Project Partner support.

attain high performance results and building rating certification by:

**Ensuring** that the construction team understands the project's high performance goals and implements best practices.

**Applying** stringent quality control standards and updating standard goals to meet the project's high performance goals.

**Keeping** thorough records to obtain third party building certification.

**Verifying** performance through building commissioning.

#### ● construction

**Tracking** and sourcing local materials and implementing on site recycling methods.

**Recognizing** that healthy building operation is impacted by actions during construction.

The GEO can help by providing:

- Templates.
- Resources.
- Workshops about building rating system documentation and best practices.
- GEO Project Partner support.

reduce operations & maintenance costs by:

**Increasing** daylighting and passive heating and cooling to decrease reliance on equipment with moving parts.

**Shifting** procedures and learning new skills to provide healthy indoor air quality and lower maintenance through new low emitting materials.

**Aligning** cleaning and maintenance procedures with updated operations and maintenance best practices to support sustainable goals and new products and systems.

**Optimizing** building performance via building automation systems and integrated controls to achieve design goals.

**Utilizing** performance contracting and operational cost savings to fund equipment upgrades and achieve energy saving goals.

#### ● operations & maintenance

The GEO can help by providing:

- Workshops.
- Case studies that illustrate Colorado-specific projects.
- Resources.