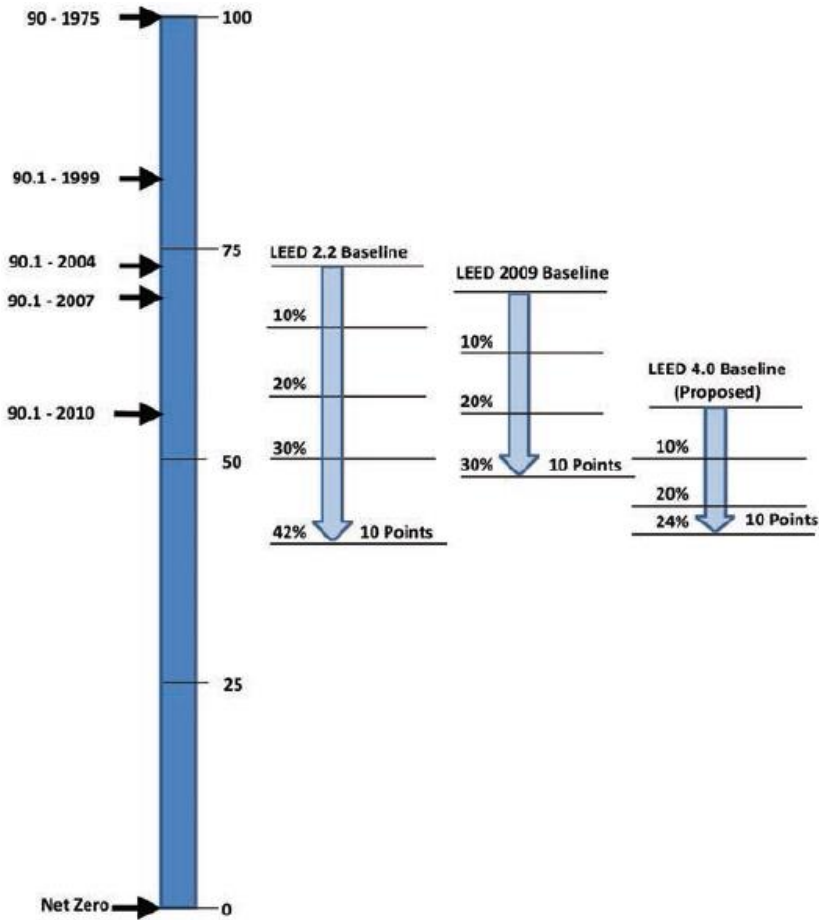
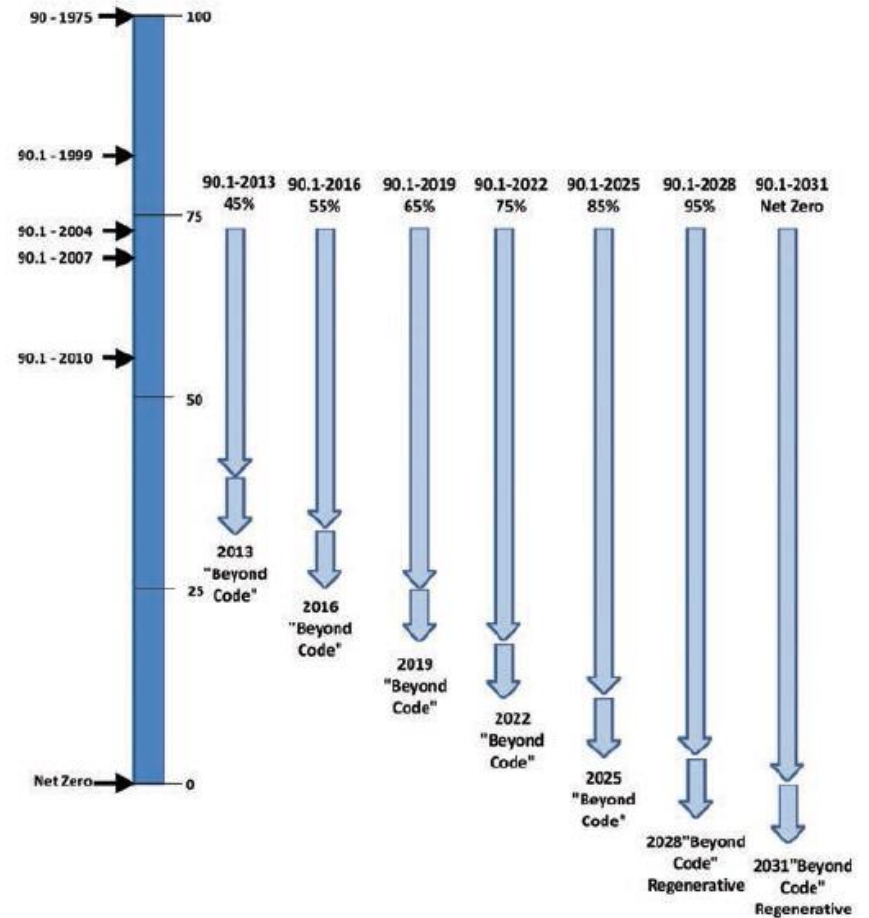


IDAP Integrated Design Assistance Program

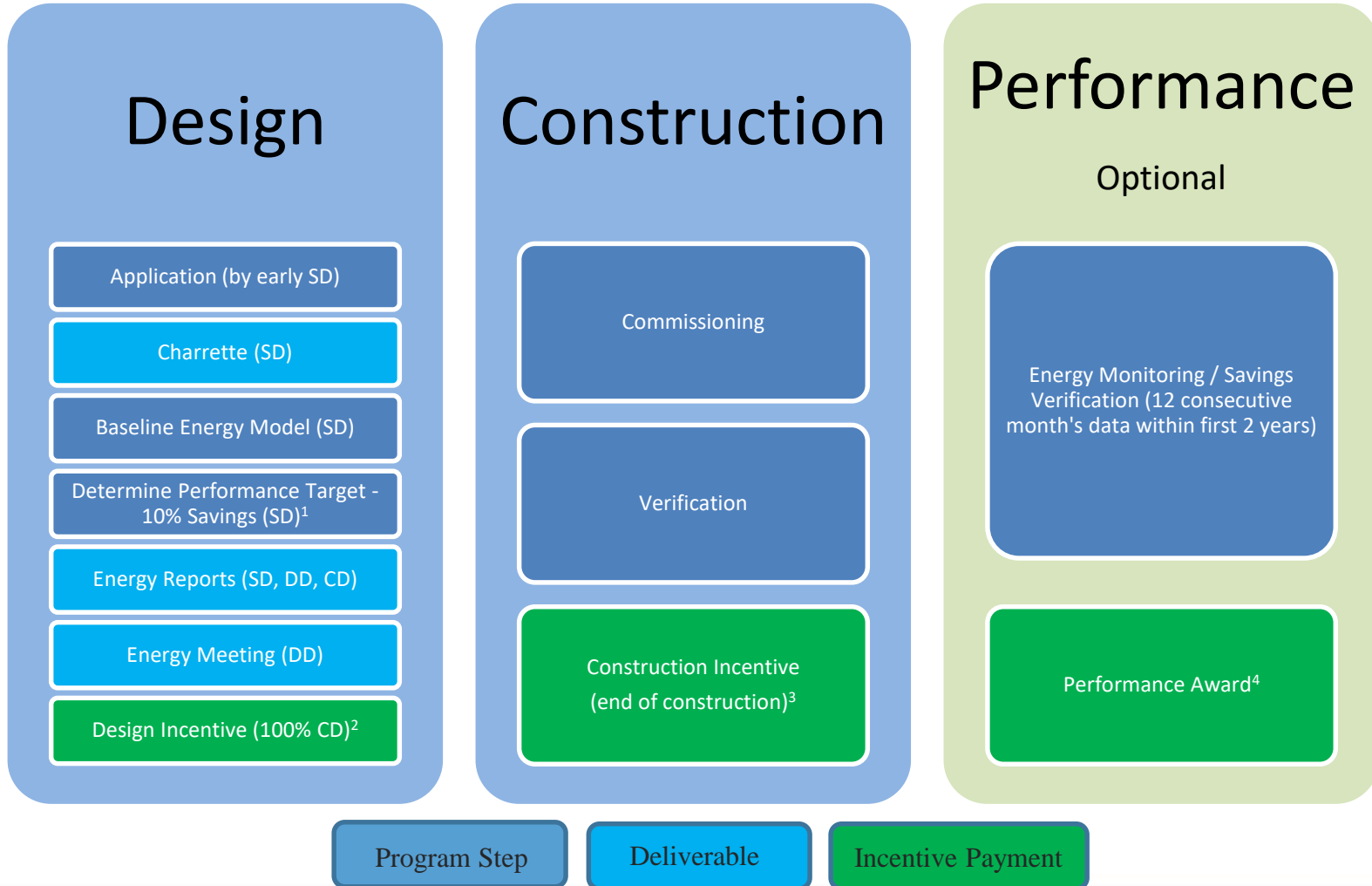
Gary Schroeder
Sr. Energy Services Engineer
Fort Collins Utilities



Normalized Building Energy Use for Versions of Standard 90.1

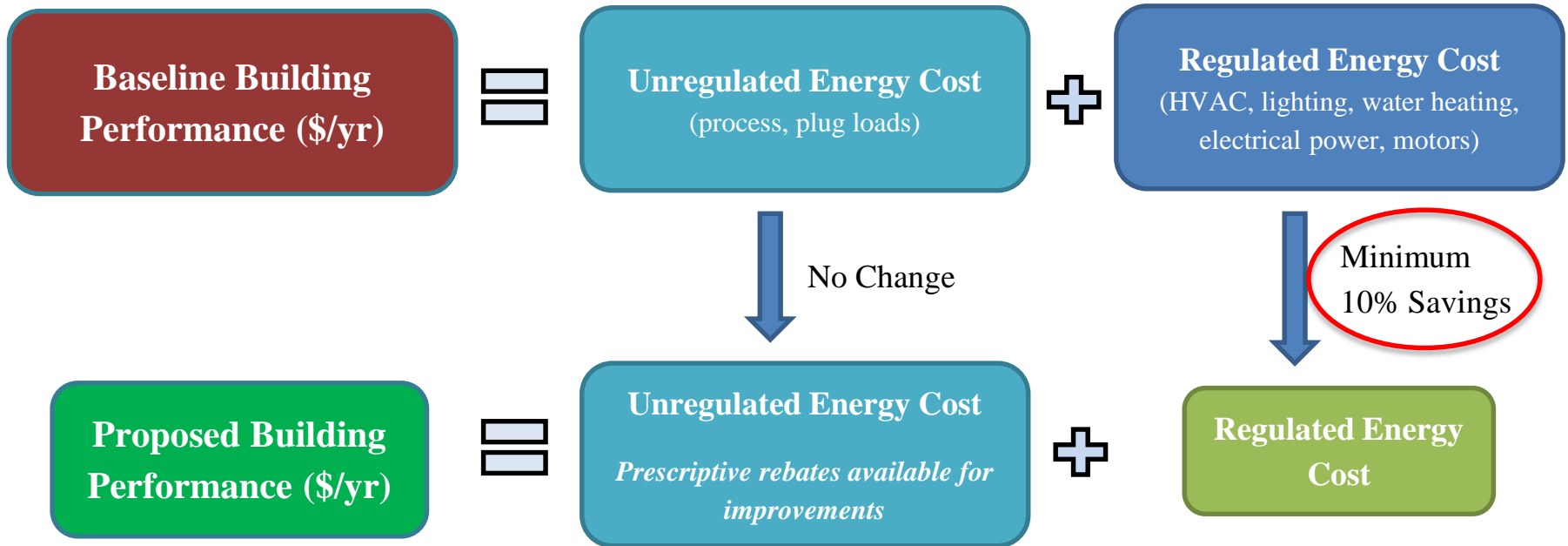


IDAP Process and Incentives



Energy Performance Target

- Minimum 10% savings in Regulated Energy Cost from code baseline.



- **Design Incentive** - \$5,000 + \$0.10/sf
(paid at the end of design)



- **Construction Incentive** – 2 years modeled energy cost savings (paid at end of construction)



- **Optional Performance Award** – 1 year actual energy cost savings (paid after 12 months of occupancy, monitored)



IDAP Building Performance Factors

Building Type	BPF _{Code*}	BPF _{IDAP**}
Multifamily	0.85	0.77
Healthcare/Hospital	0.57	0.51
Hotel	0.66	0.59
Office	0.66	0.59
Restaurant	0.63	0.57
Retail	0.64	0.58
School	0.55	0.50
Warehouse	0.66	0.59
All Others	0.62	0.56

*ASHRAE 90.1 – 2013

** 10% savings from code

$$\mathbf{BBP = BBUEC + (BPF_{Code} \times BBREC)}$$

BBP = Baseline Building Performance, annual energy cost of Baseline Building (unregulated + regulated cost)

BBUEC = Baseline Building Unregulated Energy Cost. From Baseline model

BPF_{Code} = Building Performance Factor (BPF) of a building meeting the City building code (2015 IECC, represented by ASHRAE 90.1 – 2013)

BBREC = Baseline Building Regulated Energy Cost, from Baseline Appendix G model.

$$\mathbf{PBP_t = BBUEC + (BPF_{IDAP} \times BBREC)}$$

PBP_t = Proposed Building Performance energy cost target, the maximum total energy cost of Proposed Building (unregulated + regulated cost). Unregulated energy cost will be the same in the proposed and baseline.

BPF_{IDAP} = IDAP BPF, represents 10% savings from current code

Modeled Energy Cost Savings

$$\text{Construction Incentive} = 2 \times (\text{BBP} - \text{PBP}_m)$$

PBP_m = Modeled energy cost of proposed building

PBP_m must be $\leq \text{PBP}_t$

Optional Performance Incentive =

Baseline Regulated Energy Cost

$$\text{(BPF}_{\text{Code}} \times \text{BBREC)} - \text{Actual Regulated Energy Cost}$$

Actual Energy Cost Savings

Energy Consultant Training – May 3rd, 9:00 – 11:00 am

- Required element to be an IDAP Approved EC

Other requirements for approval:

- BEMP certification and/or 5 GBCI reviews
- Demonstration of individual and company experience
- Experience in reviewing construction documents
- Ability to develop reports and lead technical discussions
- Experience modeling different building types
- Reference checks

Thank You!

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