

Cost Effective Steps to



- 1** Set project energy goals early
- 2** Optimize building shape & orientation
- 3** Design high performance envelope
- 4** Specify high efficiency mechanical systems
- 5** Select efficient appliances & lighting
- 6** Offset with renewable energy
- 7** Commission & monitor



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PURPOSE

Setting ambitious project energy efficiency goals early will help get project team buy-in and act as a guide in future decision making to help reduce energy consumption.

STRATEGIES

- Schedule goal setting meeting with the entire project team and key trade partners
- Use an integrated design process to get early input from various design and construction team members, i.e. energy efficiency consultants



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PURPOSE

Optimized building orientation and massing allows for natural heating and cooling of the building by taking advantage of sun angles and wind direction, reducing the building's energy requirements and providing space for solar panels to be installed.

STRATEGIES

- Accomplish low surface to volume ratios with simplified design while considering ease of constructibility
- Design roof to host solar PV and optimize energy production
- Orient building generally East/West to increase Southern exposure
- Incorporate window shading techniques on South facing glazing
- Utilize energy modeling early



Cost Effective Steps to



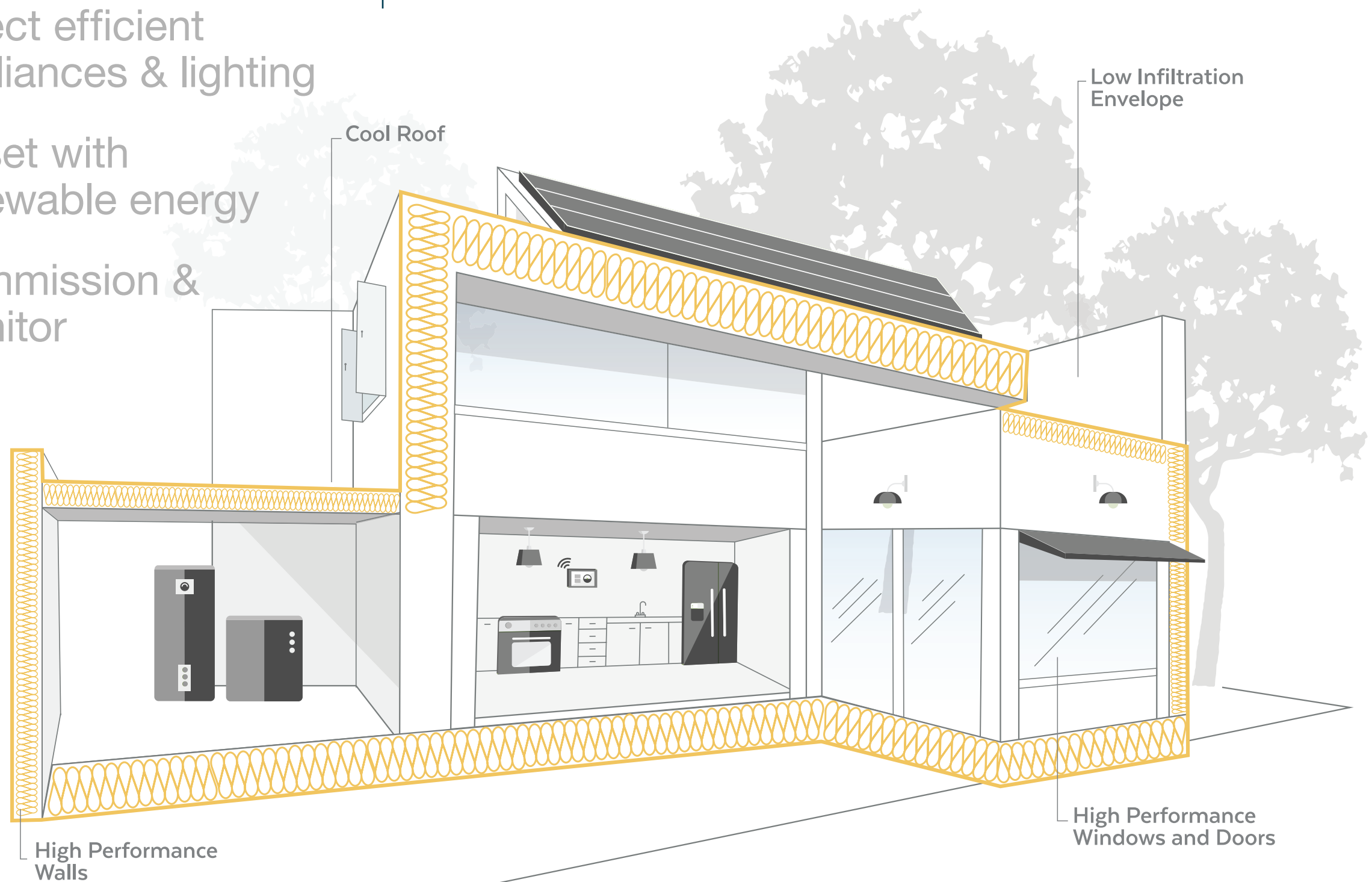
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PURPOSE

Reduces heat transfer through the building's envelope in order to reduce the energy needed to heat and cool the building.

STRATEGIES

- Prioritize air tightness, super-insulation, and thermal bridge free assemblies
- Optimize window to wall area ratio
- Optimize window orientation (South-facing is ideal)
- Create a continuous thermal boundary
- Budget for triple pane windows



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PURPOSE

Reduces energy consumption and enhances comfort, performance, and health.

STRATEGIES

- Whole building, balanced mechanical ventilation
- Advanced mechanical equipment with ductwork inside the conditioned envelope



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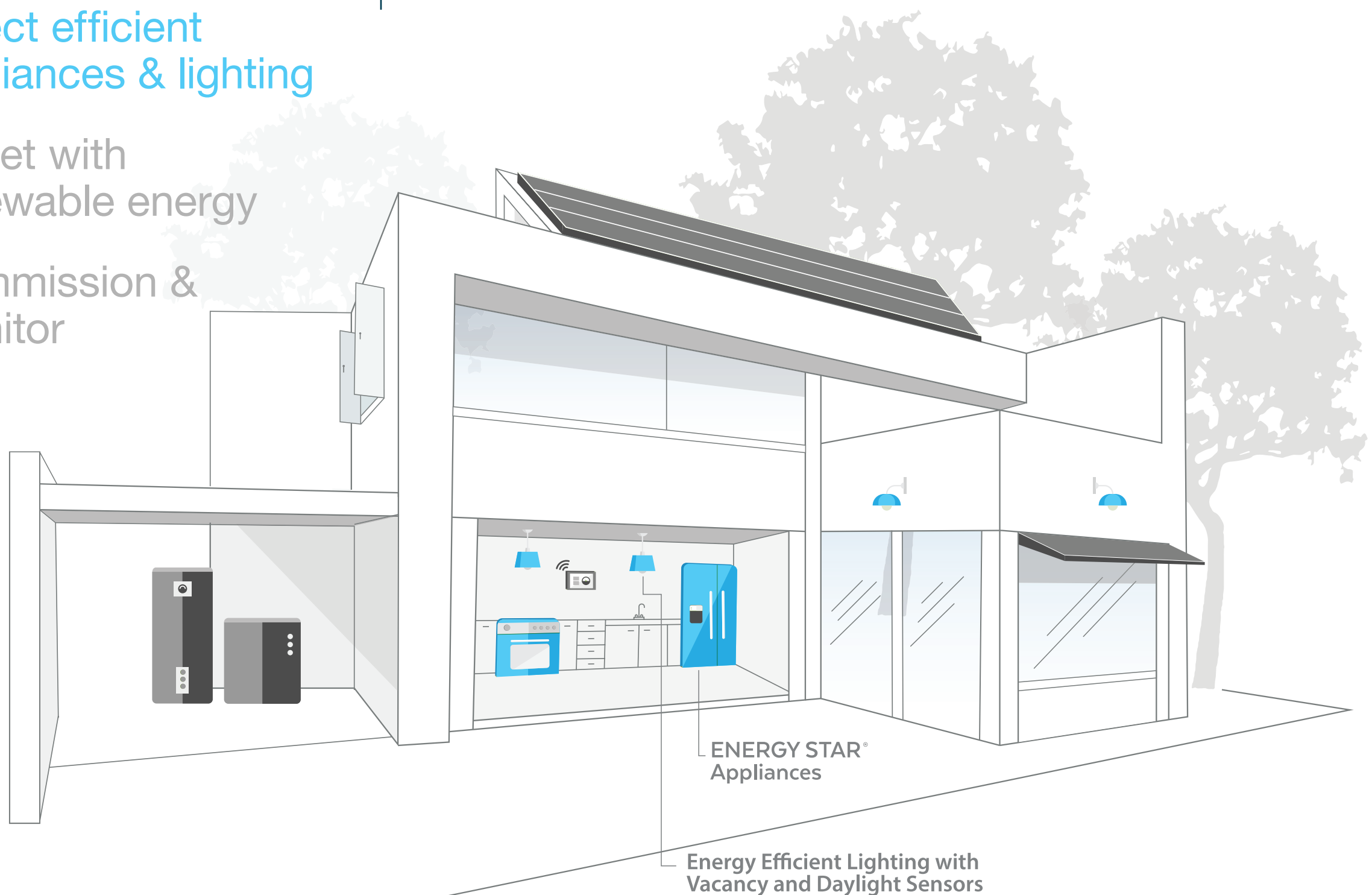
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PURPOSE

Further reduces overall energy consumption.

STRATEGIES

- Specify ENERGY STAR® rated appliances at minimum
- ENERGY STAR® “Most Efficient Products” recommended
- 100% LED Lighting
- Smart controls
- Specify WaterSense® rated plumbing fixtures



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PURPOSE

Offsets the remaining energy consumption.

STRATEGIES

- Engage solar PV consultant
- Prioritize on-site solar or consider solar ready
- If the above is not an option then consider community solar or purchase certified renewable energy credits



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PURPOSE

Proper testing and adjusting is necessary to confirm systems were installed and operating as intended.

STRATEGIES

- Third-party building certifications recommended
- Energy monitoring and dashboards encouraged

