ReNEWable Home

CR Herro
Meritage Homes


INNOVATION
SKILLS
TRAINING
TEAM
LEADERSHIP
MANAGEMENT
DELEGATING
MANAGER
MOTIVATION
RISK
CONDUCT
DIRECTING
BUSINESS
PHILOSOPHY
MISSION
SOLUTION
COLLABORATION
ABILITY
RESPECT
GOAL
VISION
TRUST
COMPANY
COACHING
COMMERCE
DISCIPLINE
TEAMWORK

renewable

living home

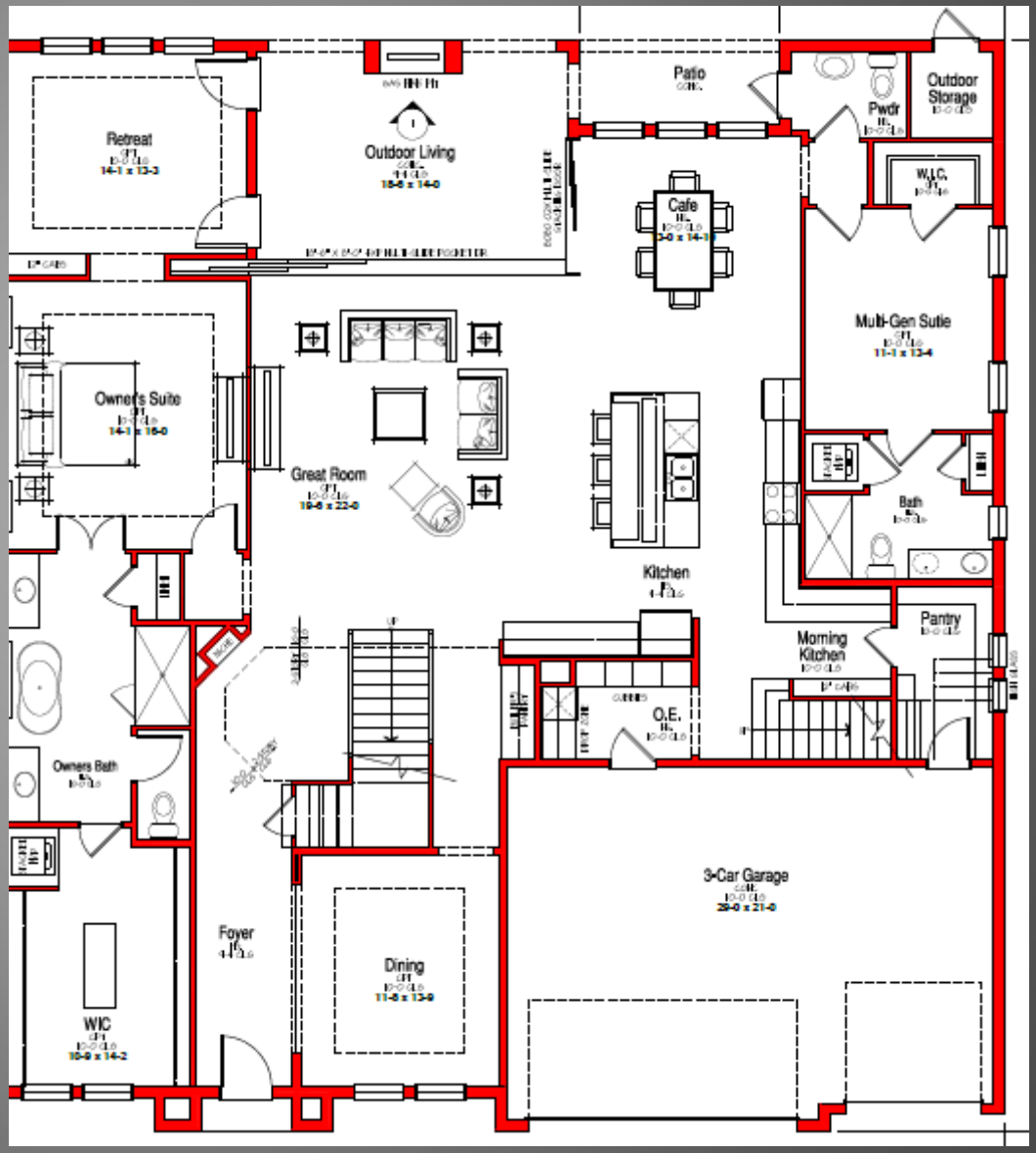
Intentions:

- Optimize Multigenerational Needs
- Improve Health
- Improve Disaster Resistance
- Optimize Energy Efficiency
- Implement Advanced Energy Management
- Improve ‘Buildability’

- MAINTAIN FIRST COST AND TRADITIONAL AESTHETICS

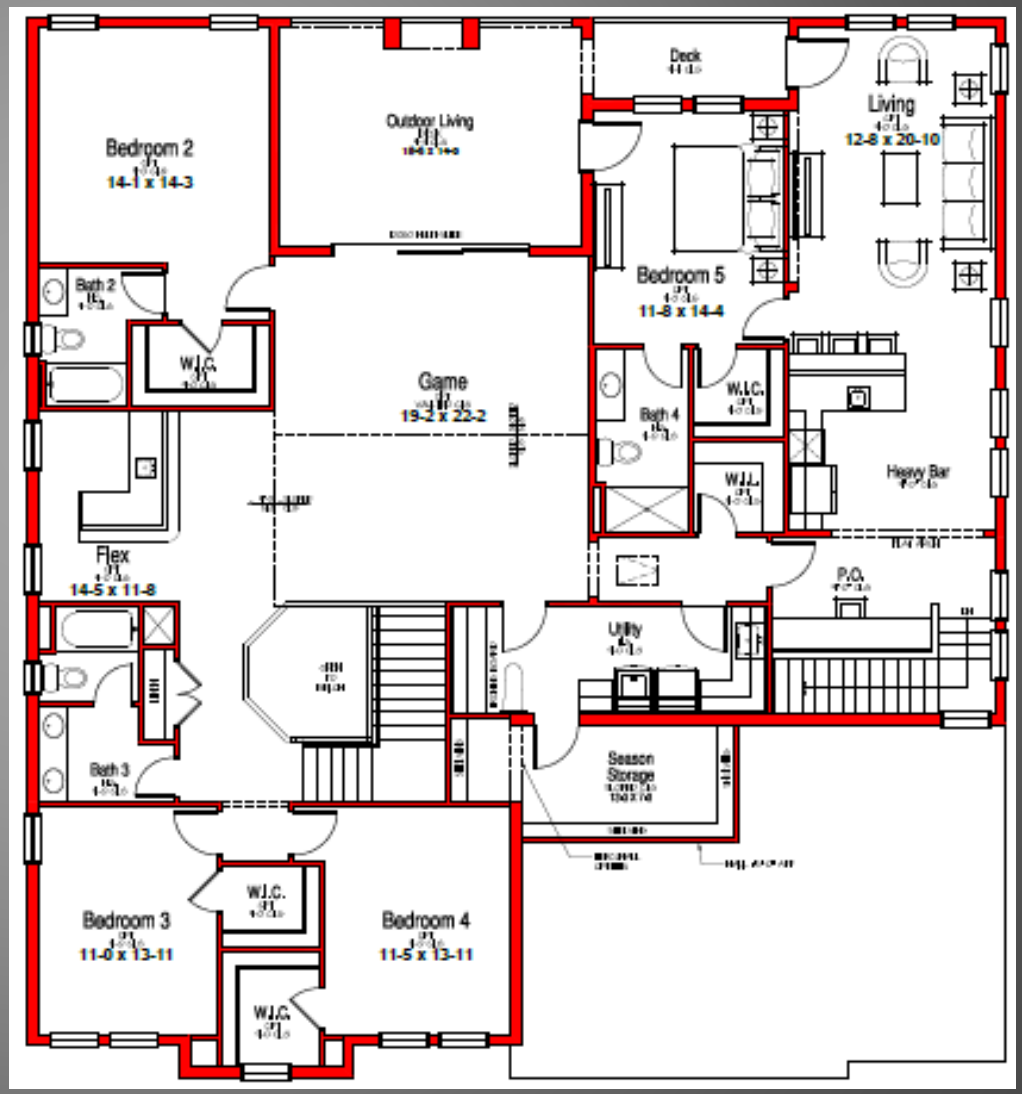
Multigenerational Design

- Independent Grandparent suite off Kitchen
- Master Retreat
- Independent 2º Access



Multigenerational Design

- Independent Boomerang Suite
- Common / Private Areas
- 3 homes in one



Improve Health

Homes to the Power of **ZERO**

ZERO
ENERGY READY HOME
U.S. DEPARTMENT OF ENERGY

What is the DOE Zero Energy Ready Home™ Label?

It is a Symbol of Excellence for energy savings, comfort, health, quality, and durability met by a select group of leading builders meeting U.S. Department of Energy Guidelines.

What is a Zero Energy Ready Home?

It is a high-performance home so energy efficient, all or most annual energy consumption can be offset with renewable energy. In other words, it's the Home of the Future.

A Symbol of Excellence

This graphic comparison chart demonstrates relative performance of this DOE Zero Energy Ready Home to existing homes (built between 1990 and 2010) and ENERGY STAR Certified Homes. Actual performance may vary.

U.S. DEPARTMENT OF ENERGY

Improve Health

- Indoor airPLUS
  - Supply ventilation
  - High efficiency filtration
  - Low VOC
  - ACH50 <2
- Smart Ventilation
- Dehumidifying humidifier
- Mildew Resistant Paint (SWP)
- VOC catalytic reduction (Air Renew)

Disaster Resistance

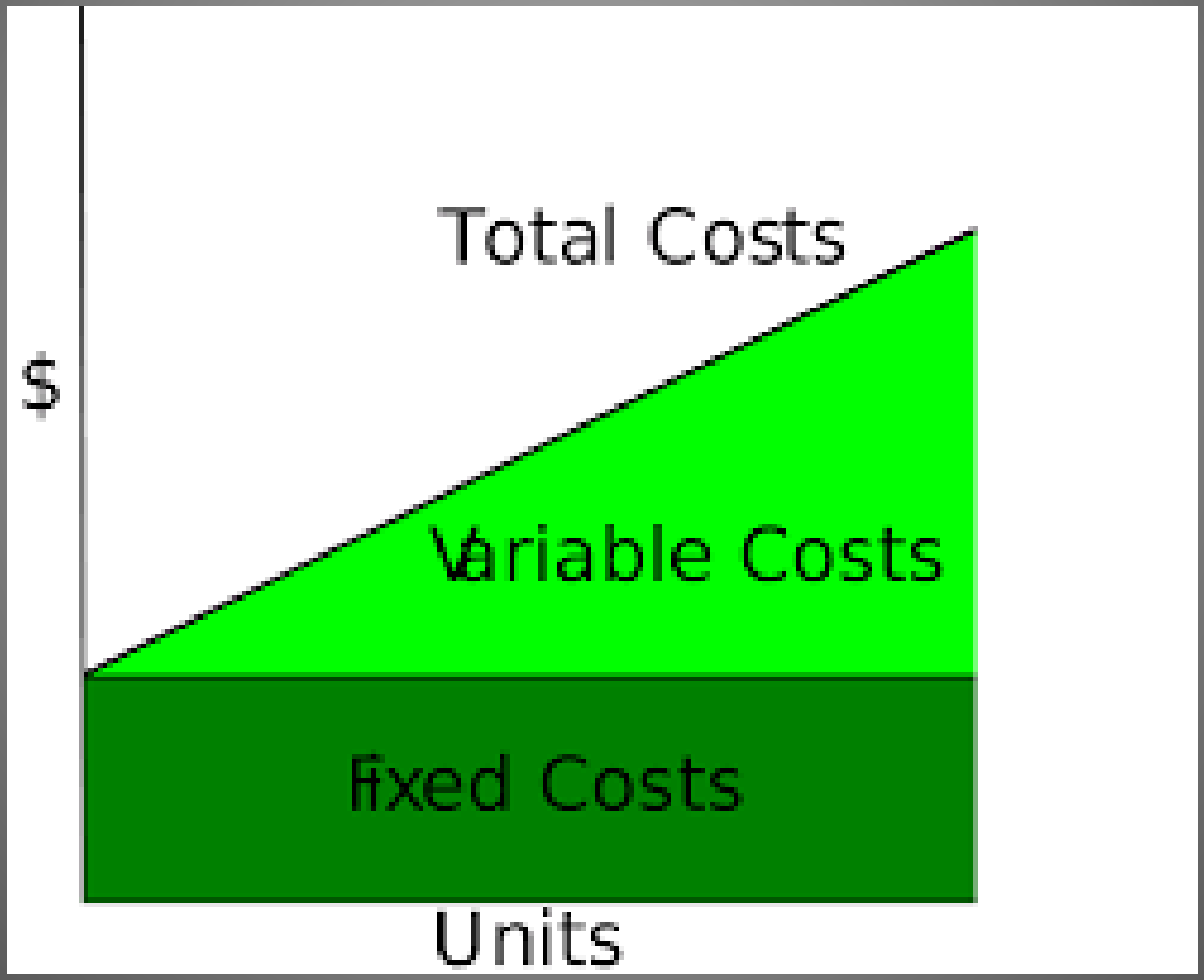
- Stronger
- More durable
- Precision engineered
- Energy efficient
- Rot/Mold/Termite-proof
- Cleaner, Healthier, Safer
- Quieter

Disaster Resistance

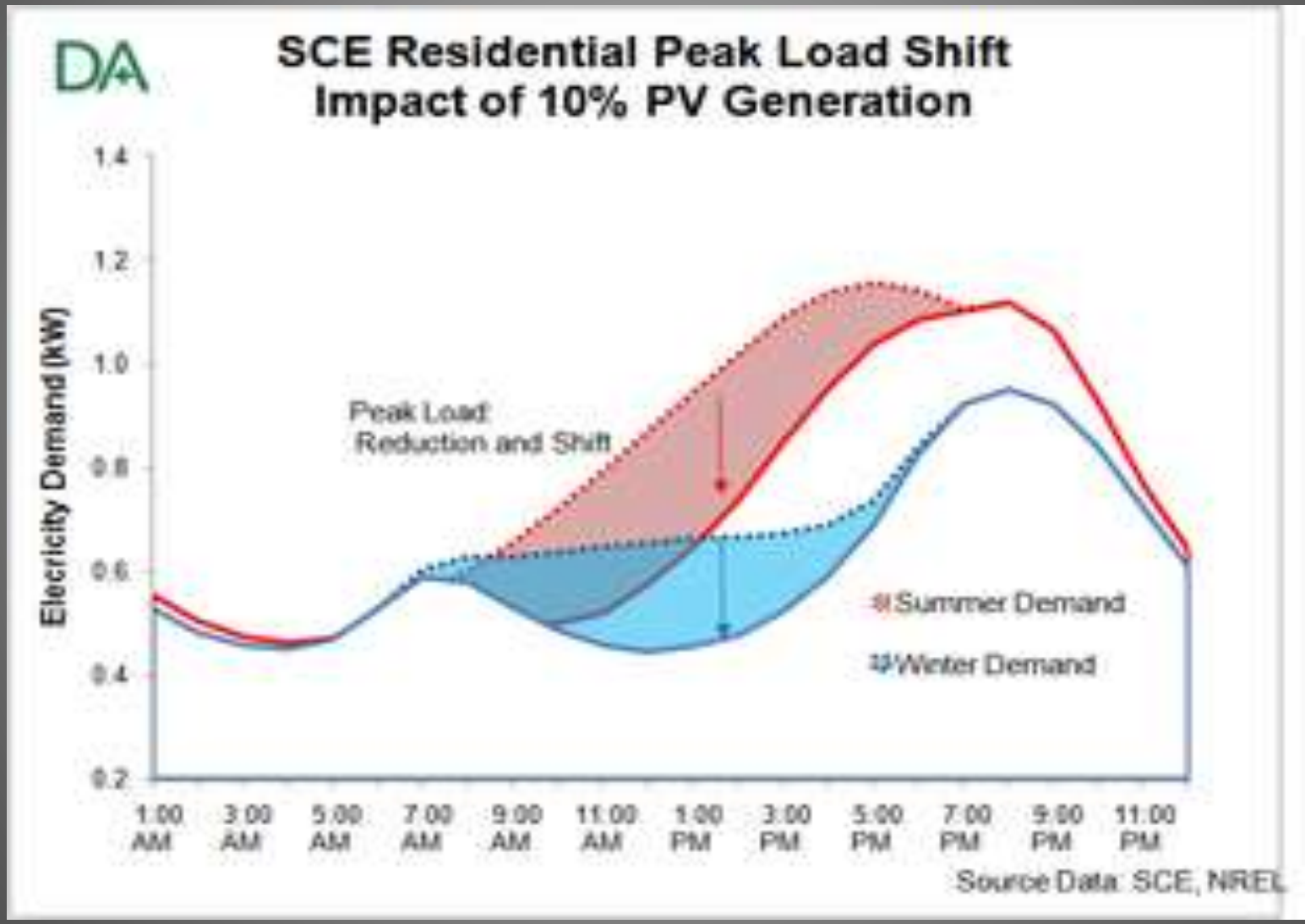
Energy Efficiency

- Insulated Slab / Slab Edge
- Insulated Concrete
- Low E Windows
- UV Reflective Roof
- Multihead Variable Flow Minisplits
- Dehumidifying ventilation
- Heat Pump water heater
- EE Appliances / LED lights
- Home Automation

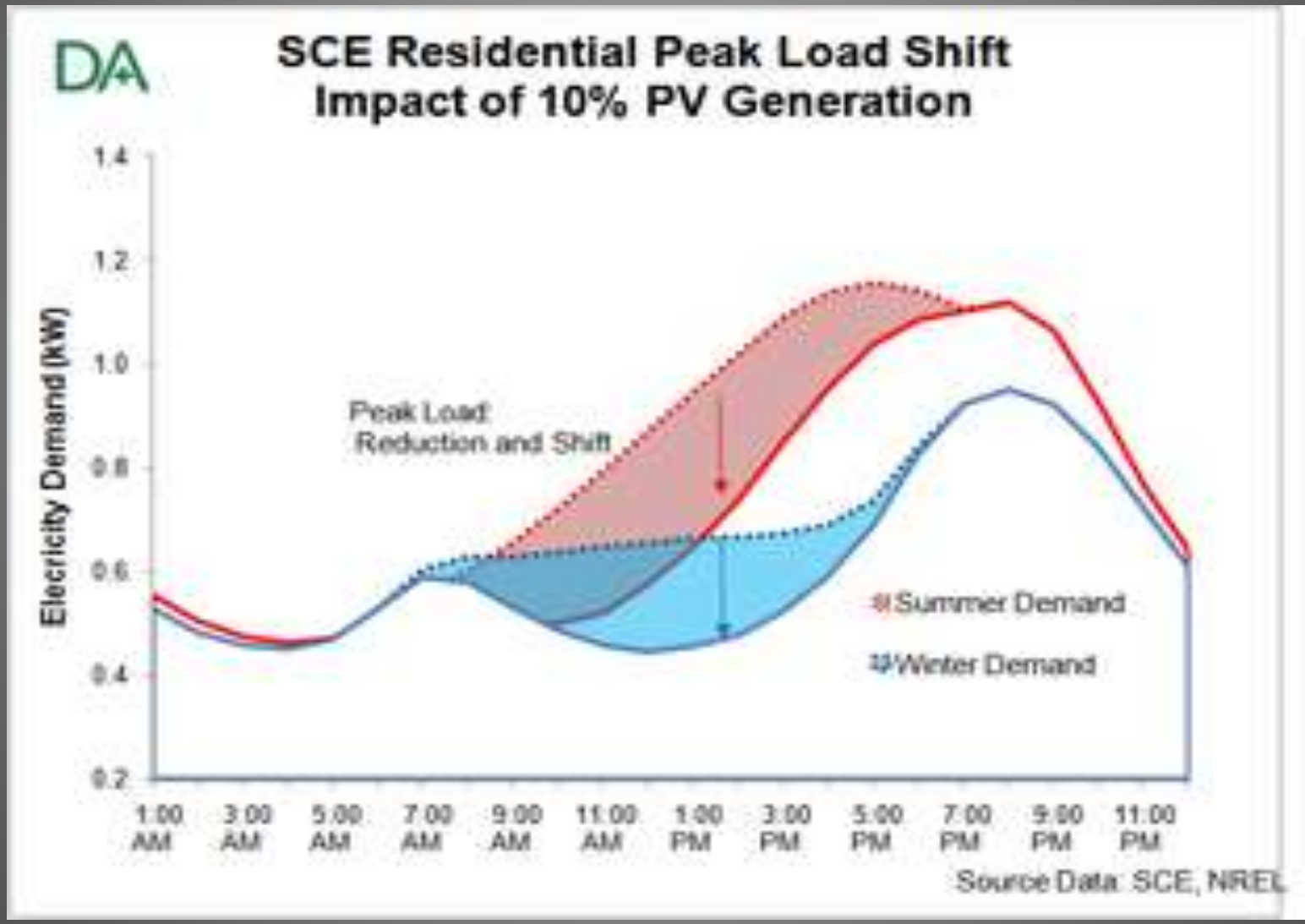
Energy Efficiency



Energy Management

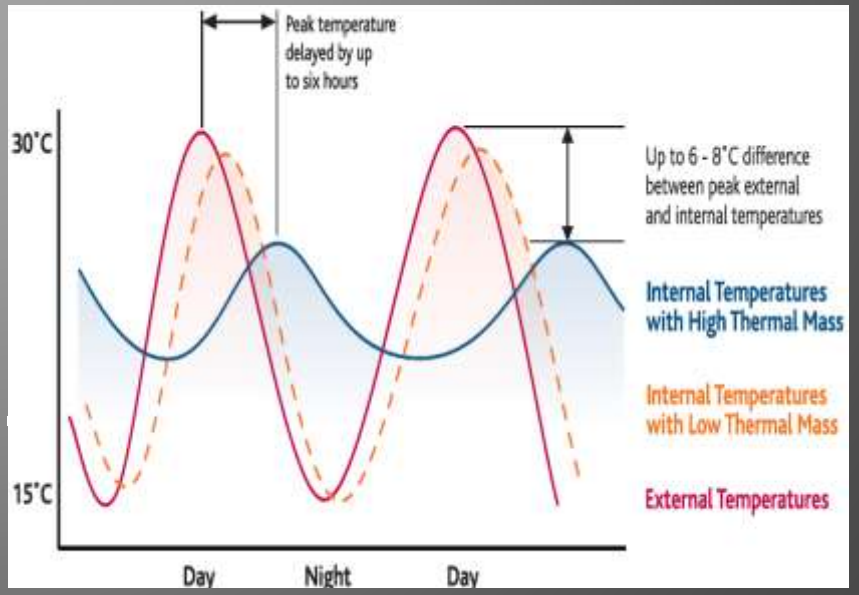


Energy Management



Energy Management

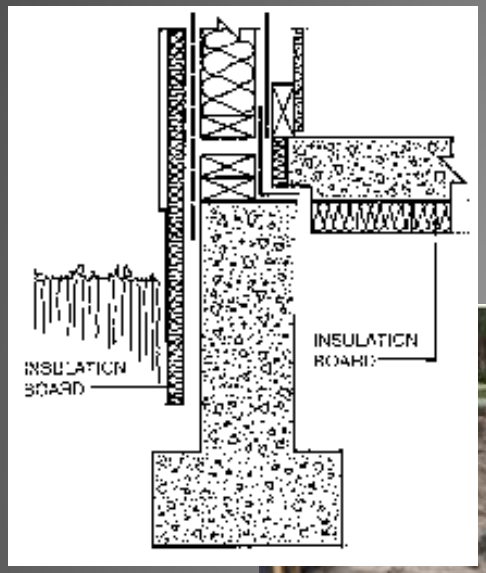
1. Smart ventilation (off peak)
2. Isolated Thermal mass / phase change
3. Thermal storage (heatpump HVAC precool off peak)
4. Low solar heat gain (reflective / vented cladding materials)
5. Smart appliances
6. Large hot water storage w/ heat pump
7. West facing solar.



Energy Management

- The number of things connected to the Internet exceedes the number of people on Earth. By 2020, there will be 50 billion connected devices

Buildability



Buildability

Buildability

Buildability

	EMBODIED ENERGY	
MATERIAL	MJ/kg	MJ/m3
Aggregate	0.10	150
Straw bale	0.24	31
Soil-cement	0.42	819
Stone (local)	0.79	2030
Concrete block	0.94	2350
Concrete (30 Mpa)	1.3	3180
Concrete precast	2.0	2780
Lumber	2.5	1380
Brick	2.5	5170
Cellulose insulation	3.3	112
Gypsum wallboard	6.1	5890
Particle board	8.0	4400
Aluminum (recycled)	8.1	21870
Steel (recycled)	8.9	37210
Shingles (asphalt)	9.0	4930
Plywood	10.4	5720
Mineral wool insulation	14.6	139
Glass	15.9	37550
Fiberglass insulation	30.3	970
Steel	32.0	251200
Zinc	51.0	371280
Brass	62.0	519560
PVC	70.0	93620
Copper	70.6	631164
Paint	93.3	117500
Linoleum	116	150930
Polystyrene Insulation	117	3770
Carpet (synthetic)	148	84900
Aluminum	227	515700

NOTE: Embodied energy values based on several international sources - local values may vary.

THANK YOU!

CR Herro

VP of Innovation