

Welcome

VISION House Seattle Cascades: A Building Science Masterpiece



EEBATM



HIGH PERFORMANCE
HOME SUMMIT 2019

OCTOBER 1-3 \ DENVER, CO

Presenters



CR Herro
VP of Innovation

Stace McGee
Environmental Dynamics, Inc



Start with Heart



Overview

“The House that Experts Built”

CR Herro

J. Stace McGee

Ted Clifton

Green Builder Media

Felton / Tim Garrison Engineering

RainBank Rainwater Harvesting

uponor

W **western**
window systems

Panasonic

PREMIER
SIPS
STRUCTURAL INSULATED PANELS
Stronger. Straighter. Greener.

 **MoistureShield.**
COMPOSITE DECKING

 CULTURED STONE

Whirlpool
CORPORATION

Boral **STEEL**
STONE COATED ROOFING

SQUARE D™
by **Schneider** Electric

Control **4**™

SCHOTT
ROBAX®

GREEN BUILDER
BUILDING A BETTER WORLD

WHY Change?

CLIMATE CHANGE

- Extreme WEATHER PATTERNS HOTTER HEAT WAVES
- DRIER DROUGHTS
- BIGGER STORM SURGES, etc
- RESOURCE DEPLETION
- RESPONSIVE DESIGN
- RESILEANCEY
- COST IMPLICATION



Thought Experiment

What would an expert in the industry do, at each point in design and building, to build a home for their grandma?

- Maintain key design features of conventional home (safe, known)
- Control cost (construction and operation)
- Improve function (health, comfort, usability)
- Challenge convention to improve total value (operating cost, resiliency)
- Make it simple (intuitive)



GOALS: GOOD, BETTER & BEST CONSTRUCTION

What we are trying to achieve

- Efficient design
 - (everything from material usage to energy, etc)
- Buildability - reproducible
- Energy
- Water
- Materials
- Technology – use of and proof of concept
- HOW TO INFLUENCE & OVERCOME INDUSTRY NORMS



Site

Cumberland, WA



Design



Design

Using topography



Design

Using the Attic



Challenges

Lions, and Tigers, and Bears



Water Management

Zero Impact Hydrology



Power Management

Zero Electric
Zero Cooling
Zero Sacrifice



Leveraging Materials

Load Management
The Trillion Dollar Design Element



Leveraging Materials

Durability: Ready for the future



Leveraging Experts

Each participant contributes to the new standard

Exemplified Materials

Exemplified Equipment

Exemplified Installation

Exemplified Controls

Monitoring and Data (Proof of concept)

New Energy Models

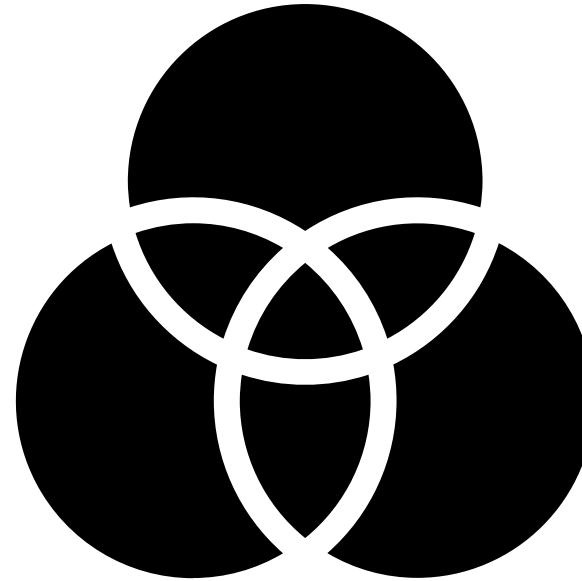


by Schneider Electric



Impact We Hope to Achieve

- **Cost / Benefit Optimization**
 - Construction
 - Operation
 - Maintenance
 - Resiliency
- **Proof of Concept**
 - Monitoring
 - Load management
 - Best practice sharing
- **Inspiration**
 - Tools to incorporate in conventional construction
 - Recommended adjustments for climate



Follow the Story

<https://www.greenbuildermedia.com/vision-house-cascades>



Thank you!

Join the conversation - #EEBASummit2019

Save the dates for next year:

