

# Delaware Cottage

Accessory Dwelling Unit Factsheet: 3 of 3

## Energy efficiency and distributed generation

### **Solar photovoltaic panels (on main house)**

- 1.67 KW Solar projects production of 2243 kWh/year. Leased from Sungevity.

### **Foundation**

- High thermal mass design foundation: 244 square feet of exposed slab floor, insulated underneath, for passive temperature management. Concrete slab absorbs natural solar heat during the day, releases warmth at night.

### **Insulation**

- 2x6 walls are wider than the typical 2x4 walls to accommodate R-19 insulation (recycled denim).
- Weather proofing and tight envelope, weather stripping in windows and doors.

### **Water**

- Gas on-demand water heater provides efficient hot water to the cottage and reduces need to maintain hot water in a large tank, thus reducing natural gas bills. More importantly it replaces the bulky and inefficient water heater in the main home, serving all 4-6 people in the two homes.
- Insulated hot water pipes.
- Low-flow sink faucets, shower head and toilet.

### **Roof**

- Energy Star standing seam metal roof – projected to last 100+ years, contains recycled content and is 100% recyclable. Energy Star certification is based on the light colored coating which makes it reflect heat, keeping the cottage cooler.
- Passive solar roof overhangs orient the cottage to receive solar radiation and heating in the winter, and provide shade to the cottage during hot summer months.



*With its array of energy-conserving features and solar panels for energy generation, the Delaware Cottage is designed for net zero energy consumption.*

### **Lumber**

- FSC (Forest Stewardship Council) certified lumber.

### **Windows and door**

- Energy efficient, Energy Star rated Marvin Integrity windows with Low E II insulated glass.
- Pultruded fiberglass substrate deflects heat and has an extremely low thermal expansion rate.
- Low-emittance coatings hold indoor heat in and block outdoor solar heat.
- Casement windows are the most efficient style available, sealing tighter than sliding windows.

### **Paint**

- No volatile organic compounds (VOC) paint.

### **Appliances and finishes**

- Energy Star dishwasher\*
- Fluorescent kitchen light.
- Induction cooktop

*\* Other appliances too small to qualify for Energy Star.*

# Delaware Cottage Costs

- + \$12,000    **Soft Costs**  
Zoning, building, and mechanical/electrical permits; Title 24 energy efficiency fee; architect's fees, engineering fees, and New Avenue Homes management fees.
- + \$47,000    **Exterior Finished Shell**  
Site preparation, foundation, framing, 9 wood Marvin windows, double door, skylight, standing seam metal roof, weather proofing, siding, exterior paint, and insulation.
- +\$28,000    **Interior Finishes**  
All interior finishes including kitchen cabinets, full bath with vanity, no VOC interior paint, lighting and electrical, wood trim, wood ceiling, wood floor in the loft, custom ladder, cabinets, shelves, and table.
- +\$7,000    **Green Upgrades**  
Forestry Stewardship Council certified sustainable lumber, tankless on-demand gas water heater, upgrade to recycled 100-year standing seam metal roof, low E windows, recycled denim insulation.
- +\$4,000    **Kitchen and Bath Upgrades**  
Custom bath tile, tile backsplash in kitchen, high quality fixtures, granite counters.
- \$98,000    Total Development Costs**



## Contacts:

**Kevin Casey, New Avenue Homes**  
[info@newavenuehomes.com](mailto:info@newavenuehomes.com), 510-621-8679  
(full service design, finance and build)

**Thomas Goetze, T&G Construction**  
[tngbuild@pacbell.net](mailto:tngbuild@pacbell.net), 510-653-6420  
(construction services)

**Mark Creedon, M2 Studio**  
[mcreedon@m2-studio.com](mailto:mcreedon@m2-studio.com), 510-845-5521  
(architectural services)



CENTER FOR COMMUNITY INNOVATION  
at the Institute of Urban and Regional Development