DiYSol

Affordable Solar

Colin Felton, 503-442-5514

Residential Solar Market

The US solar market is growing at > 20% per year.

Residential solar systems are installed at a rate of approximately 700 MW/quarter or ~900,000 homes /year (~$2 billion/yr).

With lower costs and the ability for homeowners and roofers to easily and cheaply install their own systems we will expand this market significantly.

The time is right to enter the DIY solar market due to COVID caused reduction in contractor work and wildfire grid disconnections of large numbers of households.

Problem & Opportunity

Residential solar is not DIY conducive

- panels are bulky and heavy (~5’ x 3.25’, >40 - 50 lbs)
- system installation is not intuitive
- expensive aluminum structure required for installation
- permit required for mounting structure
- panels are not available at DIY stores

The Technology

DIY Residential Solar System

- nail-gun installation
- shingles easy to handle by one person
- intuitive installation (like asphalt shingles)
- plug ‘n play wiring
- installs on top of asphalt, shingle or tile roofs
- lightweight & low-cost plastic composite structure
- easier permitting (shingles pass roofing code tests)
- International patent pending materials & design

Cost Savings

- **no or** lower installation labor cost (DIY or roofer install)
- no solar structure costs (the roof is the support)
- lower customer acquisition cost through home centers
- lower distribution cost with home centers & direct
- similar mfg cost as current panel technology
- lower wiring cost (no exposed wiring)
- lower design costs (no permitting of structure necessary)

Up to 50% the installed cost of existing technology

Startup Plan

Stage 1:

- Build composite structure mold
- Outsource composite structure & solar module manufacturing
- Assemble solar panels
- Code testing & certification: weathering, fire, wind, connectors
- Full scale demonstrations
- $200K, 1 year; convertible note

Stage 2:

- Outsource solar module manufacturing
- Setup composite structure manufacturing & assembly facility
- Start marketing & sales
- Finalize development of whole-roof system
- $1M, 1 year; Angel financing, loans

Stage 3:

- Setup solar module manufacturing
- Seek distribution agreements
- $3-5M for 100MW/yr, 1.5 years; VC's, grants, loans

Team

Colin Felton, CEO

- PhD Chemical Engineering
- 23 years experience developing composite materials & products
- Experienced with several roofing product oriented startups

Dr. Deepak Shrestha, COO

- PhD Structural-Mechanical Engineering
- 20+ years experience testing building materials
- Automation expert

Travis Cucinello, technology advisor

- 15 years solar installation & inspections
- Wiring – interconnection expert
- Tesla certified technician

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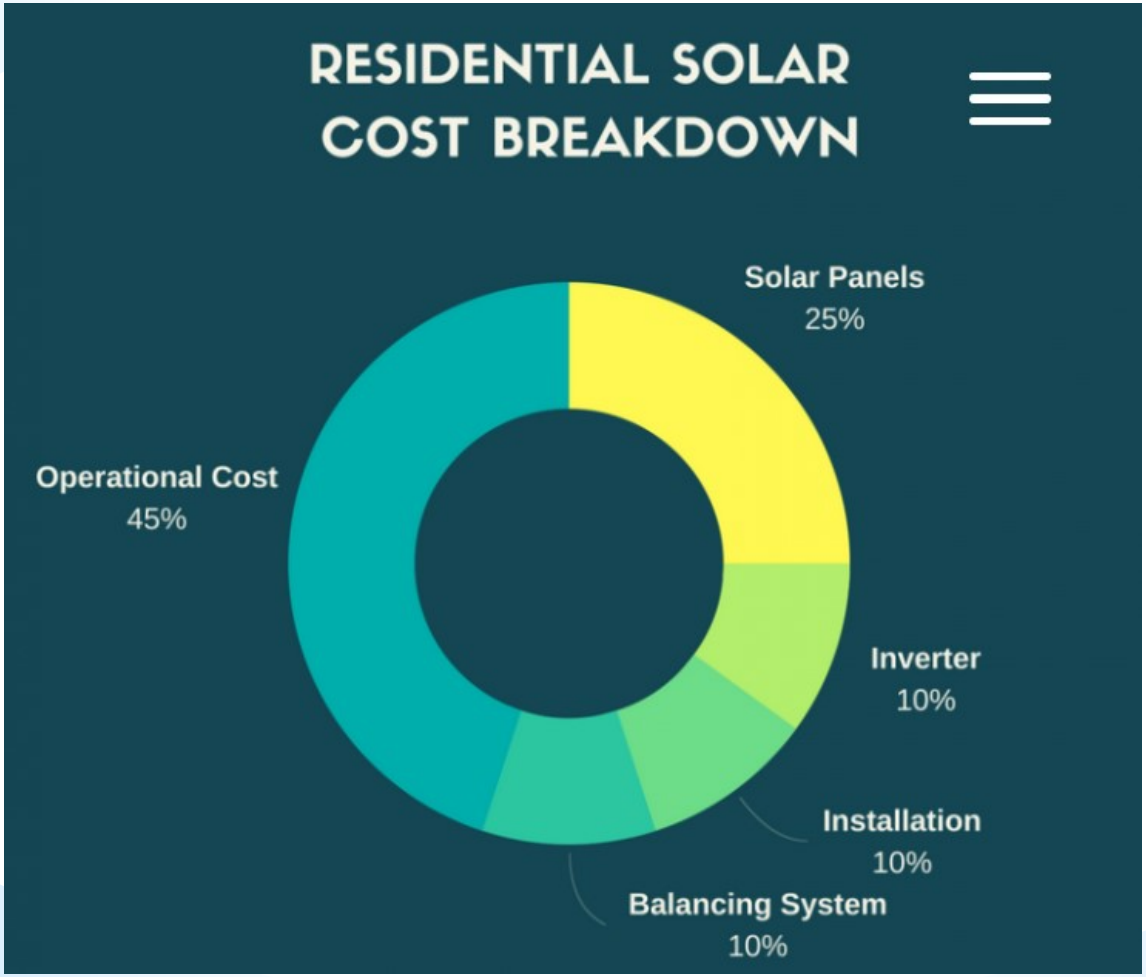
Cost Analysis



The Technology

DIY Residential Solar System

- **installs with nail gun**
- **small & lightweight (easy to handle by one person)**
- **intuitive installation (like asphalt shingles)**
- **plug ‘n play wiring**
- **installs on top of asphalt shingles (roof provides the structure)**
- **plastic composite structure**

Product: A 50 Watt ***nail-up*** solar panel with a plastic composite substructure, about the length of a standard asphalt shingle, that is easy to handle, intuitive and significantly less expensive to install (installed cost ~$1.50/watt). The panel is designed to go on top of sloped asphalt or tile roofs or walls and installed like normal asphalt shing -play wiring.