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# Project Open (Phase 1)





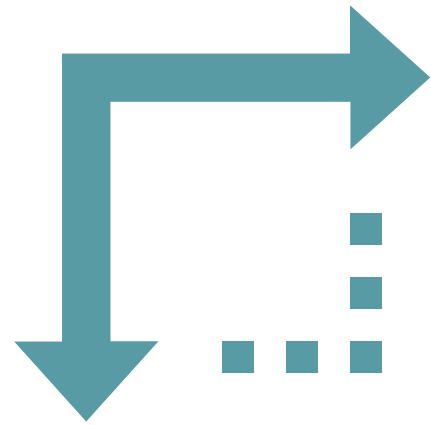
112 Units  
(81 Affordable/31 Market)



\$17MM total budget  
(\$13MM construction)



Funded with LIHTC,  
OWHLF, Conventional



1.5 Acres  
5 stories of wood on podium



Parking ratio of 0.9:1  
Half structured



12 month build  
2 month lease-up

# What Else Can Housing Do?

## Physical Needs

Air Quality

Housing Stability

Transportation

Food Access

## Psychological Needs

Purpose

Creativity

Stress Relief

Belonging

# Market Barriers to Net Zero Adoption

An architectural rendering of a modern multi-story building. The building features a prominent corner tower with a brick facade and a grid of windows. The rest of the building has a lighter, possibly stone or concrete, facade with a regular window pattern. In the foreground, there is a parking lot with several cars parked. The sky is overcast.

Density constraints of rooftop solar

Upfront installation costs

Developer/Builder/Developer Inertia

# Project Open

Phase I  
Est. Late 2017





# Project Open (Phase I) Comparison

Equipment	Conventional	Project Open Phase I
Water Heater	Bradford BRG240T6N 40 GAL/40 BTU/#32/4.0 WC	STIEBELSTEM24PLUS TEMPRA 240V 12KW TANKLESS WATER HEATER & DSUPPLY
	\$625.00	\$660.00
General Plumbing		
	\$6,500.00	\$6,500.00
Air Exchange	Air King BFQ80	Panasonic FV-08VKS3 Exhaust Fan
	\$60.00	\$130.00
Heating/Cooling	Gas Fired Furnace Goodman GMSS92 Cased Indoor A/C Coil Goodman CAPF182486 Outdoor Condensing Unit Goodman GSX13	Fan Coil Unit GET24 Heat Pump NXH524GKA Duct Heater 30"x8"
	\$5,670.00	\$4,650.00
Gas lines		
	\$350.00 -	\$0.00
Ductwork		
	\$1,500.00	\$1,500.00
Combustion air shafts		
	\$300.00 -	\$0.00
Envelope penetrations	4 per unit	2 per unit
	\$200.00	\$100.00
General electrical		
	\$7,500.00	<u>\$8,600.00</u>
Per Unit Cost		
	<b>\$22,705.00</b>	<b>\$22,140.00</b>
Building Cost		
	<u>\$2,542,960.00</u>	<u>\$2,479,680.00</u>
<b>Savings (pre-rebate)</b>		<b>\$63,280</b>



# Project Open (Phase 2)



# Project Open (Phase II) Comparison

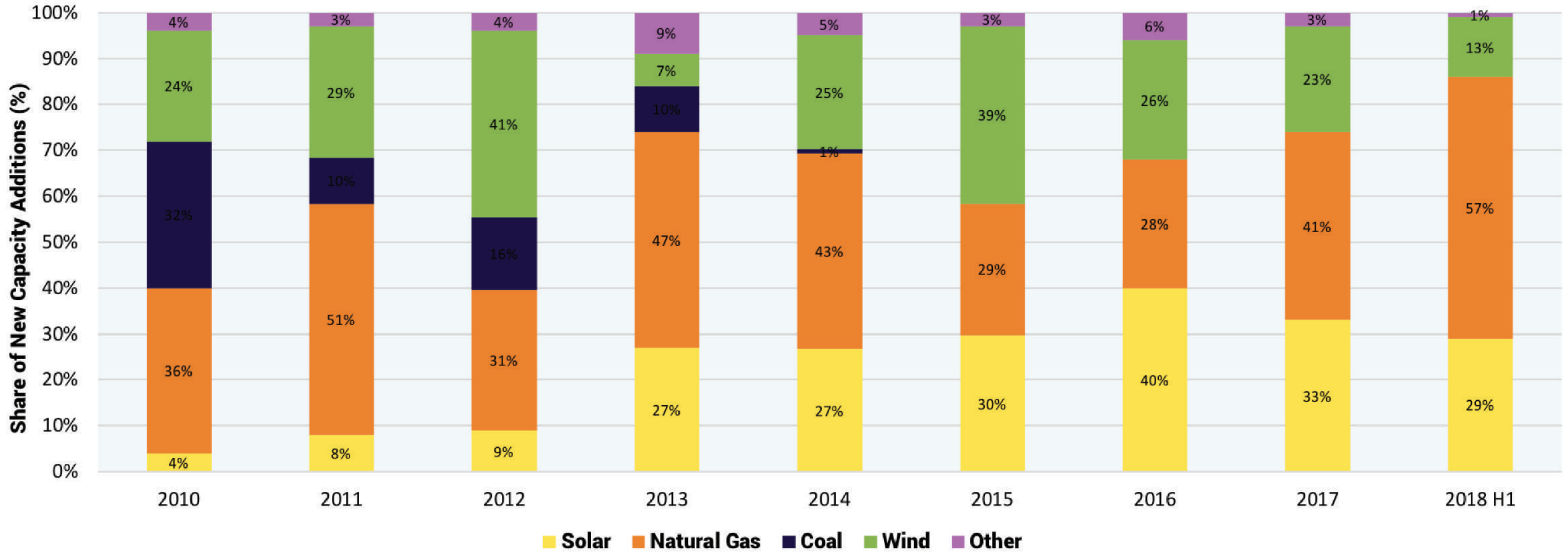
Equipment	Conventional		Project Open Phase II	
Water Heater	Bradford BRG240T6N 40 GAL/40 BTU/#32/4.0 WC	\$625.00	STIEBEL STEM24PLUS TEMPRA 240V 12KW TANKLESS WATER HEATER & DSUPPLY	\$660.00
General Plumbing		\$6,500.00		\$6,500.00
Air Exchange	Air King BFQ80	\$60.00	Panasonic ERV (optional)	\$0.00
Heating/Cooling	Gas Fired Furnace Goodman GMSS92 Cased Indoor A/C Coil Goodman CAPF182486 Outdoor Condensing Unit Goodman GSX13	\$5,670.00	Wall Mounted Heat Pump System FTX15NMVJU / RXL15QMVJU	\$4,100.00
Optional Aesthetic Upgrade			Fancy pants wall unit (optional) CTXG12QVJUW(S)	\$250.00
Gas lines		\$350.00 -		\$0.00
Ductwork		\$1,500.00 -		\$0.00
Combustion air shafts		\$300.00 -		\$0.00
Envelope penetrations	4 per unit	\$200.00	2 per unit	\$100.00
General electrical		<u>\$7,500.00</u>		<u>\$8,500.00</u>
Aggregate per unit costs		<b>\$22,705.00</b>		<b>\$20,110.00</b>
Overall building costs		\$2,156,975.00		<u>\$1,910,450.00</u>
<b>Total Building Savings</b>				<b>\$246,525</b>

# The Exchange



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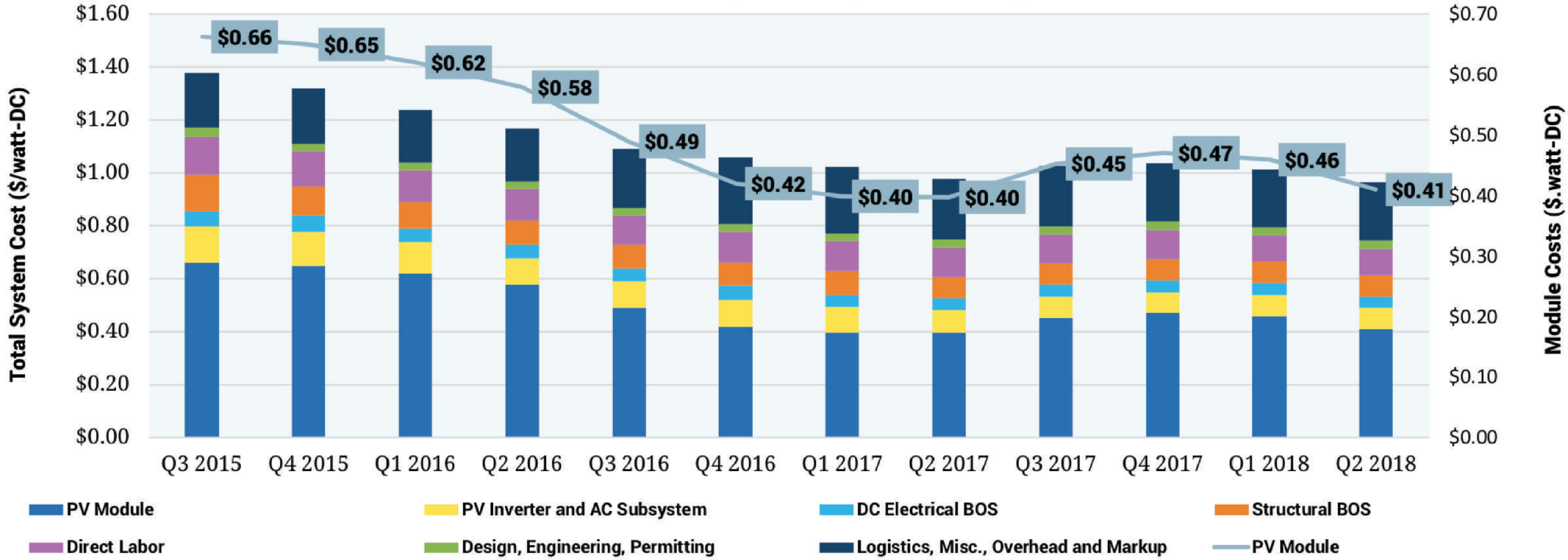
## Annual Additions of New Electric Capacity



Source: SEIA/Wood Mackenzie Power & Renewables, *U.S. Solar Market Insight*; Lawrence Berkeley National Laboratory, *Tracking the Sun*

Source: SEIA/Wood Mackenzie  
Power & Renewables *U.S. Solar  
Market Insight*

### Fixed Tilt Utility-Scale System Pricing



Source: SEIA/Wood Mackenzie  
Power & Renewables U.S. Solar  
Market Insight

## Residential Solar PV System Pricing

