

# Our Generation is Changing Energy



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# We Have New Energy Options

## Energy products that do not burn fuel

### Drive Electric

Electric is Better.

- ✓ Safer
- ✓ Save on fuel cost
- ✓ Lower maintenance costs
- ✓ Faster, smoother, quieter
- ✓ No tailpipe emissions
- ✓ No more gas stations



#### SAVE ON FUEL COSTS

Save \$100 - \$150 per month  
That's \$1,200 to \$1,800 every year  
Electricity costs much less than gasoline!¹

### Go Solar

Solar is local.

Solar panels have made  
energy a local product

Local energy is like local food,  
it makes us more self-reliant,  
it reduces pollution, it's healthier



#### SAVE WITH SOLAR

Solar panels will reduce your utility bill!  
How much you save depends on how sunny  
it is where you live & local rates.

### We Can Choose

Energy is now more Democratic!

We are the first generation with  
viable clean energy choices



# We're Turning to Clean Energy

## People are embracing clean energy

### We have the social momentum

The energy transition is a global priority

Most major religions are calling for change

*"The use of highly polluting fossil fuels needs to be progressively replaced without delay."*

- Pope Francis



We have a global agreement to shift away from fossil fuels, an unprecedented collaboration among nations



*"You can resist an invading army, but you cannot resist an idea whose time has come"*

- Victor Hugo

### Clean energy is popular

There are now over **1,000,000** Solar homes in the United States<sup>2</sup>



Tesla's new Model 3 was the most successful car launch in history with over **375,000** reservations in the first week<sup>3</sup>



Every **3** minutes A home or business goes solar in the United States<sup>4</sup>

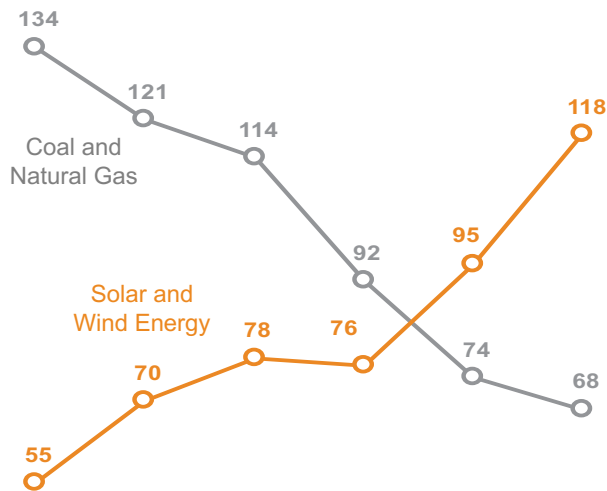


# The Trends are Favorable

## The energy transition is already happening

### The power industry is changing

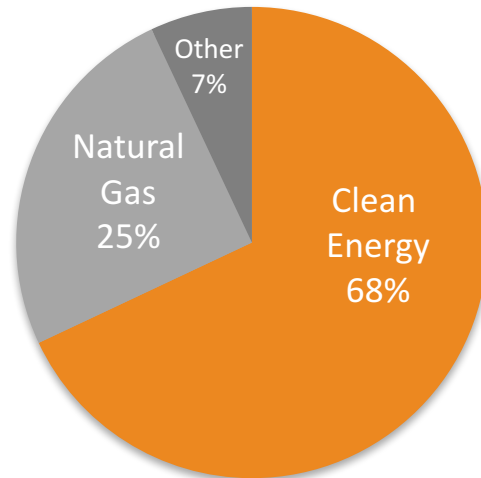
Wind, solar are adding capacity faster than fossil fuel



Global Capacity Installations<sup>5</sup>  
Gigawatts, 2010–2015

### United States energy mix is changing

Clean energy lowers cost and inflation risk



United States Capacity Additions 2015<sup>6</sup>  
Solar and wind dominated the market for new energy

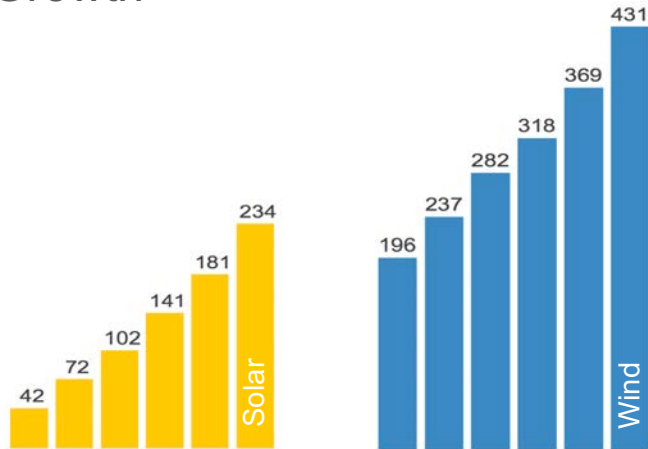
# It's Good for Jobs and the Economy

## Energy is the worlds biggest industry

### Creating Opportunity

Trillions will be invested in new energy

### Growth



(Cumulative Capacity, Gigawatts, Global, 2010-2015)<sup>9</sup>

### Building a More Resilient Economy

More jobs, less energy imports, stable energy pricing

### Investment

Coal, Oil, and Gas \$130 billion

Solar and Wind Energy \$286 billion

(Worldwide, 2015)<sup>10</sup>

### Jobs

Coal, Oil, and Gas 187,117

Solar and Wind Energy 475,545

(DOE "U.S. Energy and Employment Report", January 2017)<sup>11</sup>

# It's the Right Direction

Clean energy doesn't consume water or pollute the air

## We'll Save Water



**Almost 50%**  
of our water is drawn by  
thermal energy  
generation



United States Water Withdrawals<sup>7</sup>

## We'll Breathe Easier



**Over 70%**  
of air pollutants come  
from the power and  
transportation  
sectors



Sources of Primary Pollutants<sup>8</sup>

# It's Simply Better

We can stop extracting, burning, polluting

## Fossil Fuel Cycle

**EXTRACTION**  
of Carbon Fuels and  
Radioactive Materials

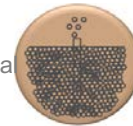
**MINE**  
Coal  
and  
Uranium



**DRILL**  
Oil and  
Natural  
Gas

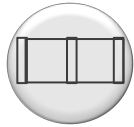


**FRACK**  
Oil and Natural  
Gas

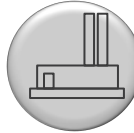


**PROCESSING**  
Transportation, Storage of  
Solids, Liquids and Gasses

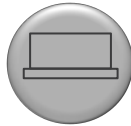
**TRANSPORT**  
Pipelines  
Trains, Trucks  
Supertankers



**REFINE**  
Oil and  
Natural Gas

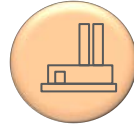


**STORE**  
Tanks  
Caverns



**COMBUSTION**  
and Fission of Fuels  
to Useful Energy

**BURN**  
Coal and  
Natural  
Gas



**BURN**  
Natural  
Gas and  
Heating Oil



**BURN**  
Gasoline  
and  
Diesel



## No Fuel Required



# So Let's Change Energy

Here's how:

## Choose Clean Energy

Buy solar panels, buy an electric car and start saving money



## Choose Efficiency

Labels help us make better choices that save money



## Vote

We need to put a tax on carbon emissions, and lower income tax.

“Tax what we burn, not what we earn”



## Waste Less

Efficiency is great way to save money, and the quickest path to pollution reductions



## Upgrade

New thermostats help you reduce energy use and expenses



## LED light bulbs

Last longer and use 84% less energy

Excellent return on investment - quick payback



## Be Energy Aware

Changing behavior is free and saves money

It's as simple as turning out the lights when you leave a room



## Measure Performance

Thermal imaging shows where your house is leaking energy



## Share

We are the first generation with real clean energy choices

Many people aren't aware of the transition to clean energy

The success of clean energy is a story worth sharing





Sources:

<sup>1</sup> US Department of Energy

<sup>2</sup> Solar Energy Industries Association

<sup>3</sup> Tesla Motors, Photo: CleanTechnica

<sup>4</sup> Solar Energy Industries Association

<sup>5</sup> BNEF

<sup>6</sup> BNEF Sustainable Energy in America Factbook

<sup>7</sup> US DOE "The Water Energy Nexus"; Torcellini, P., Long, N., & Judkoff, R., "Consumptive Water Use for U.S. Power Production"

<sup>8</sup> Source: Pearson Prentice Hall 2006

<sup>9</sup> BNEF

<sup>10</sup> UN Environment Program, Global Trends in Renewable Energy Investment 2016

<sup>11</sup> UN Environment Program, Global Trends in Renewable Energy Investment 2016



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