



# Rooftop Solar Policy in Nevada and California

Alternatives to Utility-scale Renewable Energy in the  
Desert

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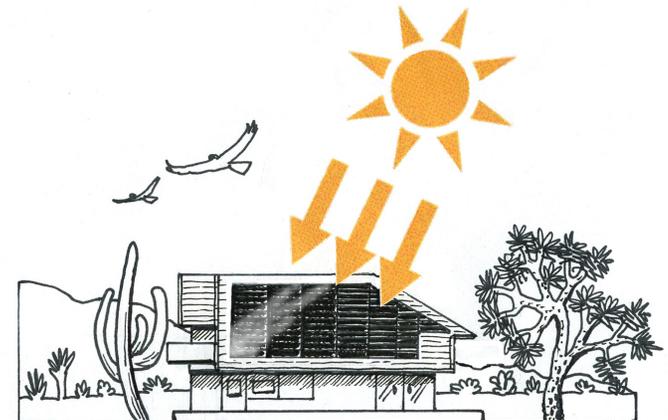
# What is Net Energy Metering?

- Policy to support residential rooftop solar system connected to grid



# Net Energy Metering

- "NEM" - billing arrangement that provides credit to customers with solar systems for electricity their rooftop solar panels generates. Meter keeps track of how much electricity is consumed by the customer, and how much excess electricity is generated and sold back to the grid. Customer pays only for the *net amount* of electricity used from utility.
- System <1 megawatt



# History in Nevada

- 1997 - Nevada legislation enacts NEM, requires NV Energy to provide NEM until 3% cap reached
- 2014 – cost of photovoltaic solar plummets globally
- Feb 2015 – Solar City opens in Las Vegas, Reno in April
- May 2015 - Senate Bill 374 passed and signed – gives the Public Utilities Commission authority to establish solar metering rates, set potential interconnection fees and reconsider the state's 3% solar cap -- instead of state legislators

Nevada jumps from the 14<sup>th</sup>-largest residential solar market in 2014 to **second in US in 2015**, reaching 235 MW cap sooner than expected in August



# Controversy Erupts

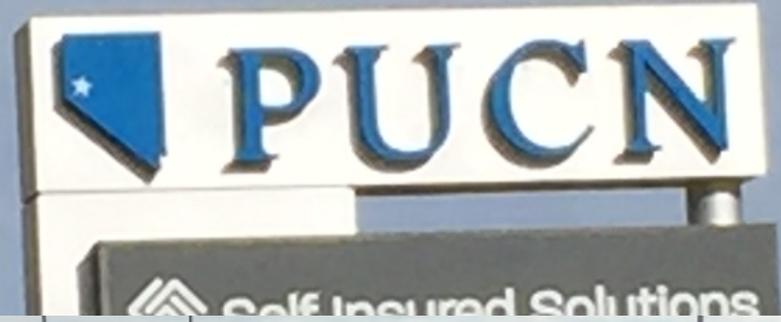
- **Debate begins as cap reached** -- “NEM1” (original 3% cap) set at retail rate of electricity, SB 374 directs regulators to establish “NEM2” tariff to address the remuneration debate between utility and solar installers. PUC devises stopgap measure to extend retail rate net metering but only until end of 2015
- NV Energy petitions for new fees on rooftop solar and retroactive fees
- Dec 22, 2015 – PUC sides in favor of NV Energy
- 17,255 rooftop solar NEM homeowners in Nevada impacted



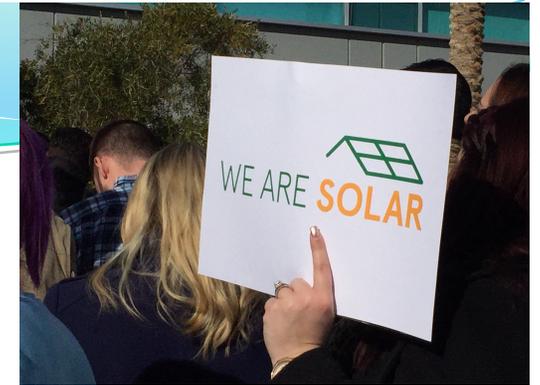
# Public Utilities Commission of Nevada Decision

- Only state to retroactively apply new fees to existing NEM customers (**no grandfathering**)
- **Monthly fixed service charge for NEM customers will rise hugely:** \$12.75/month in 2015 to \$17.90/month in 2016 and then \$38.51/month by Jan 1, 2020 in S NV, \$44.43 in N NV. Non-solar customers will continue to pay the \$12.75 monthly fixed charge
- **Reduced compensation for rooftop generation** (lower per kiloWatt hour credit for excess generation): current credit ~11 cents per kWhr would be reduced to about 9 cents in 2016, declining to 2.6 cents by Jan 1, 2020
- Allow customers to use optional time of use rate structure

# Popular Protests



# Events After Decision



- Huge protests by public and solar leasing companies
- Dec 24, 2015 -- Nevada Bureau of Consumer Protection files motion for stay
- Southern Nevada Home Builders Association also files a motion for stay
- Solar City, SunRun, Vivant exit Nevada, cut ~600 to 1,500 jobs
- Jan 12, 2016 – solar customers launch class action lawsuit against NV Energy challenged the ruling on the grounds of the contracts clause of the Constitution
- Jan 13 -- PUC rejects all requests to stay the order, so new rates will go ahead
- Petitions filed for hearings. NV Energy, in a surprise move, petitions regulators to instate a grandfathering provision

# Second PUCN Hearing

- Feb 12 – PUC unanimously votes to keep higher rates and **not grandfather** in existing customers. New rate hikes taking effect extended from 4 years to 12 years
- Solar advocates gain 55,000 signatures, hope for ballot measure supporting rooftop solar this Nov



# Utilities use cost shift argument

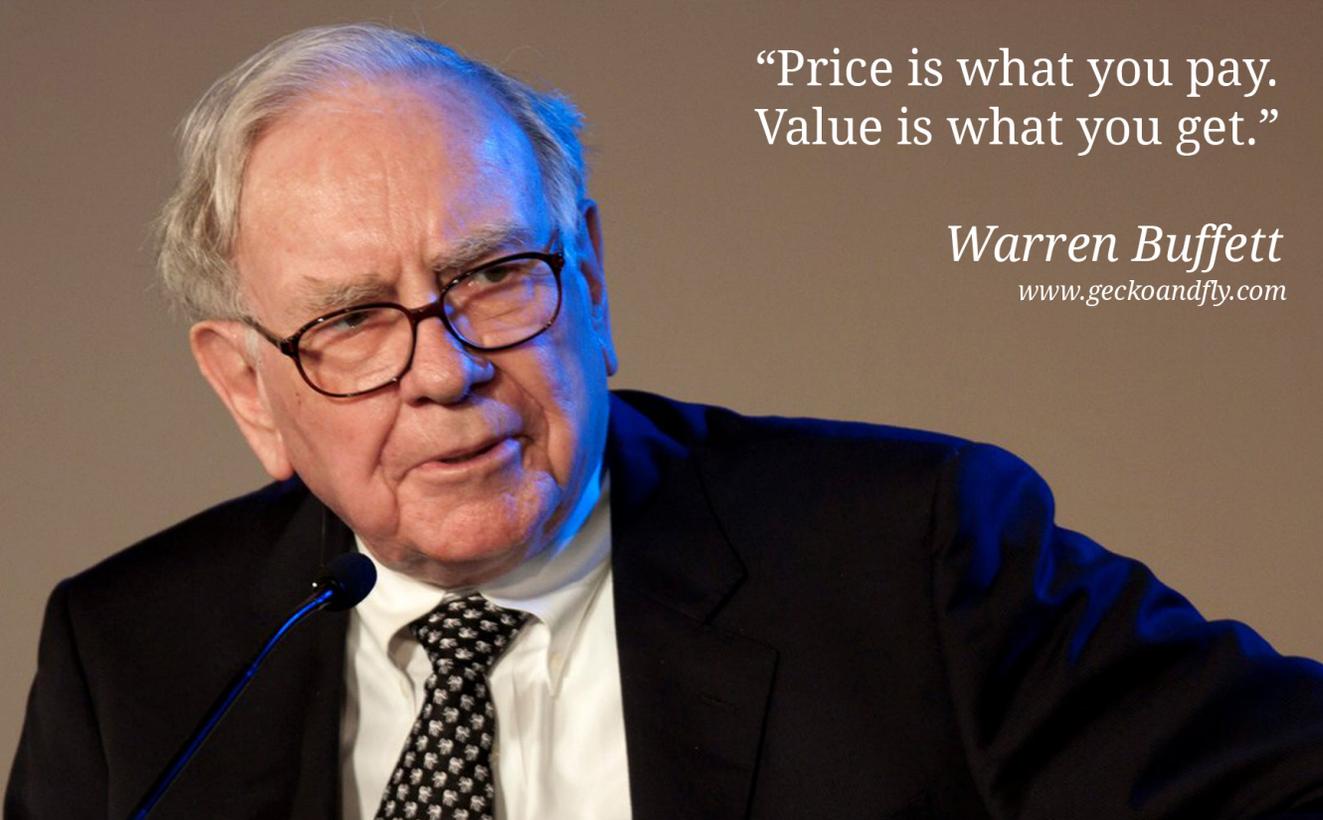
- But study conducted for the PUCN by Energy + Environmental Economics (E3) reported to the PUCN in 2014 there were no significant costs going forward into 2016 to nonparticipating ratepayers from homeowners who install a rooftop solar system (in order of \$0.01/kWh). May actually reduce costs
- Now PUCN claims this study is out of date
- Nevada Bureau of Consumer Protections says numbers need to be vetted, need more time



# Benefits of Rooftop Solar

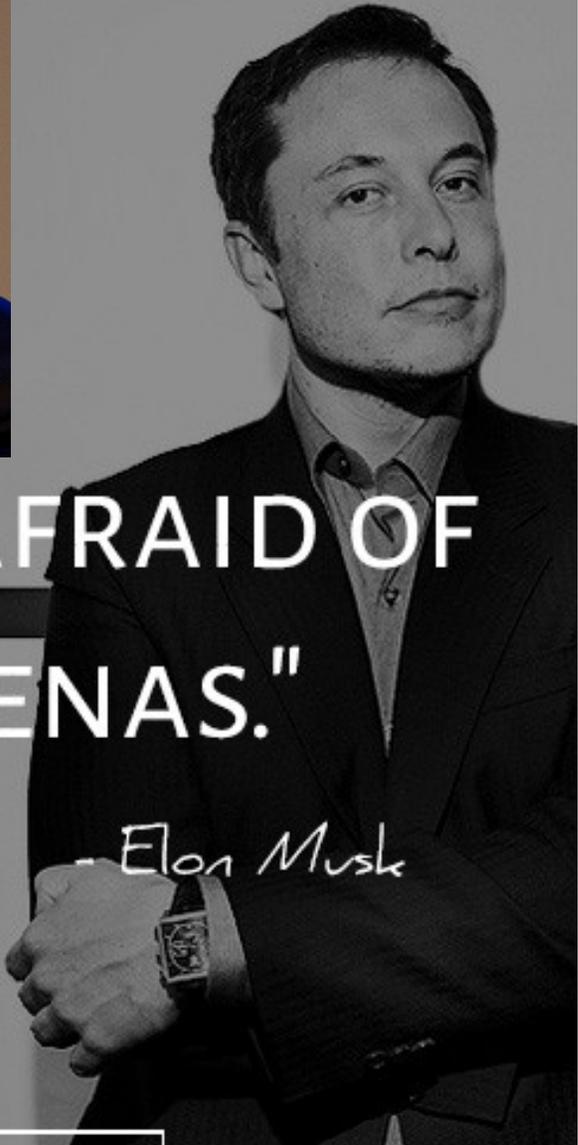
- Reduced grid congestion, increases reliability
- Reduced need for costly new transmission
- Reduced need for construction of more natural gas power plants, especially peaker plants (such as a \$900 million natural gas plant in the near future, likely only needed for a few months of year)
- Moves utilities toward their Renewable Portfolio Standard goals without upfront cost to them (NEM counts towards Nevada RPS; as efficiency in California RPS)
- Allows utility to defer some distribution upgrades
- Values low volume users and energy efficiency
- Value of net excess energy
- DG energy storage reduces peak demand
- Job creation
- Avoided land use





“Price is what you pay.  
Value is what you get.”

*Warren Buffett*  
[www.geckoandfly.com](http://www.geckoandfly.com)



“DON'T BE AFRAID OF  
NEW ARENAS.”

*- Elon Musk*





# California Decision NEM 2.0

- Dec 15, 2015 CPUC decision -- Rooftop solar customers receive full retail rate credit for the energy they export back to the grid
- Rejection of utility demand charges and fixed fees
- But added \$75-150 one-time interconnection fee
- Require NEM customers to pay **nonbypassable charges** \$0.02-0.03 per kiloWatt-hour customer buys from the grid before netting out exported electricity to the grid – could be > \$5/month
- Require NEM customers connecting in 2018 or later to start service on a time of use (TOU) rate – higher rates during peak
- **Grandfathers in earlier NEM customers** for next 20 years at former rates
- Office of Ratepayer Advocates supports decision



# Other Distributed Generation Policies

- CCAs - Community Choice Aggregators
- PACE - Property Assessed Clean Energy
- CEESP - California Energy Efficiency Strategic Plan



# Off-the-Grid



# DG Alternatives to Utility-scale Solar Projects in the Desert



# Ivanpah Valley

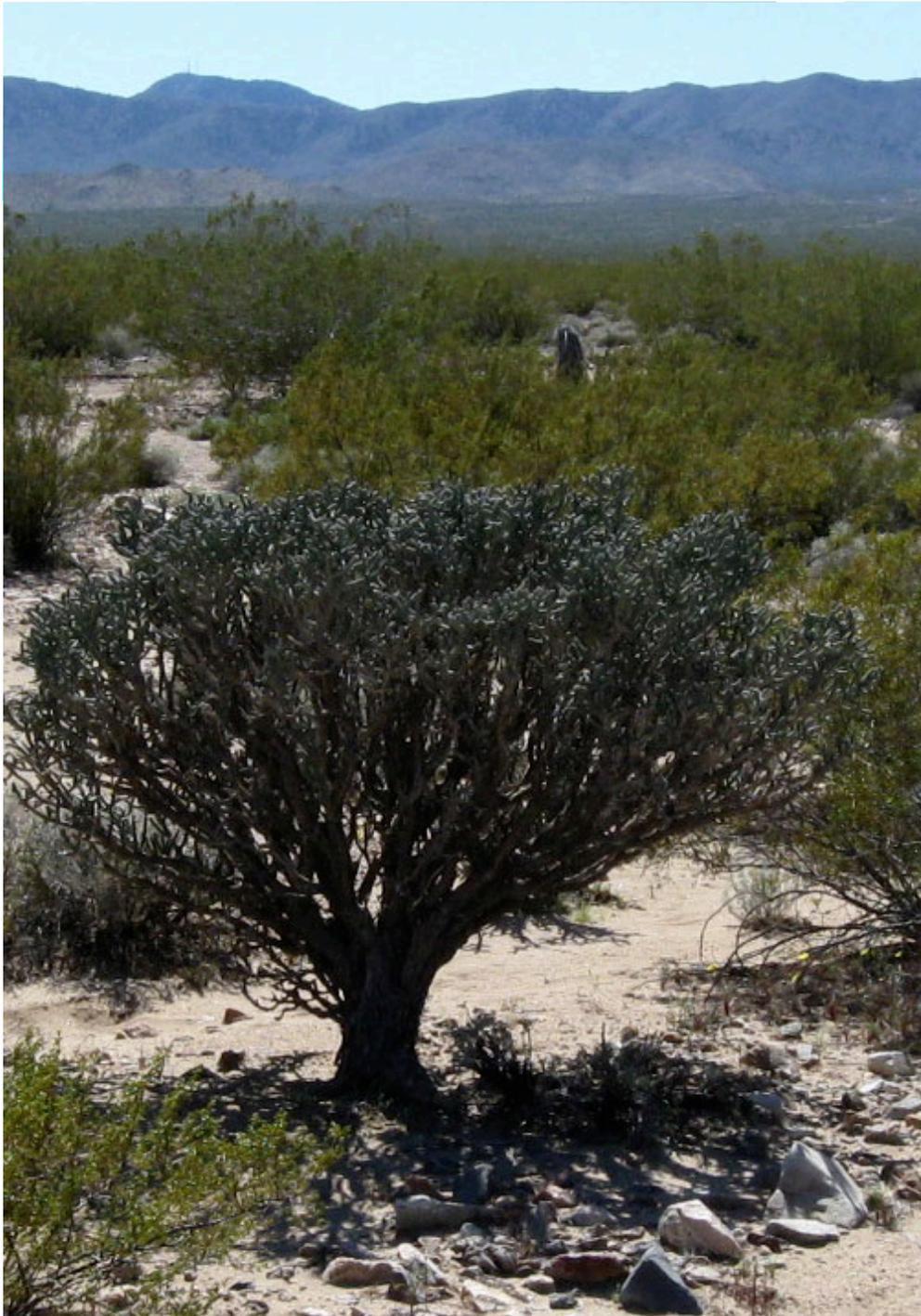


















# Support Better Rooftop Solar Policy

- Sign petitions
- Write comments
- Keep track of PUC decisions
- Hold governors and lawmakers accountable for helping increase rooftop solar with best policies for the people

