

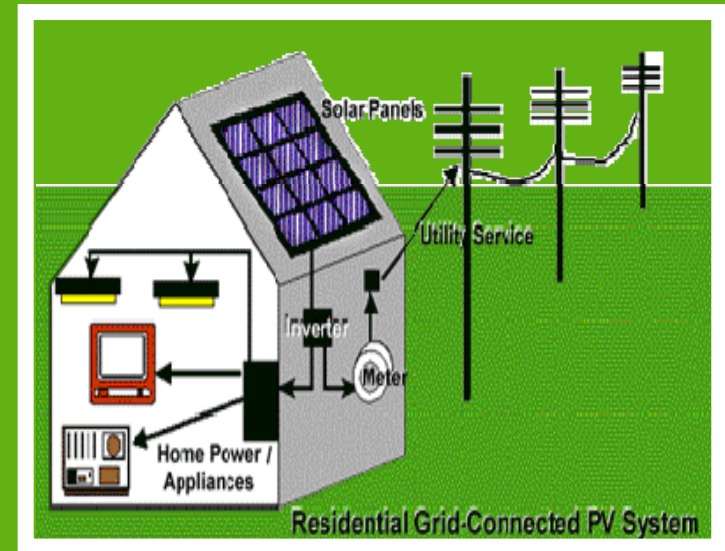
# Net Energy Metering Workshop

Marin Energy Authority  
March 15, 2010



# What is Net Energy Metering (NEM)?

- For small grid connected local renewables (i.e. rooftop PV)
- Established in California in 1996 by PUC 2827
- 40,000 residential and commercial accounts in California
- Overseen by the CPUC

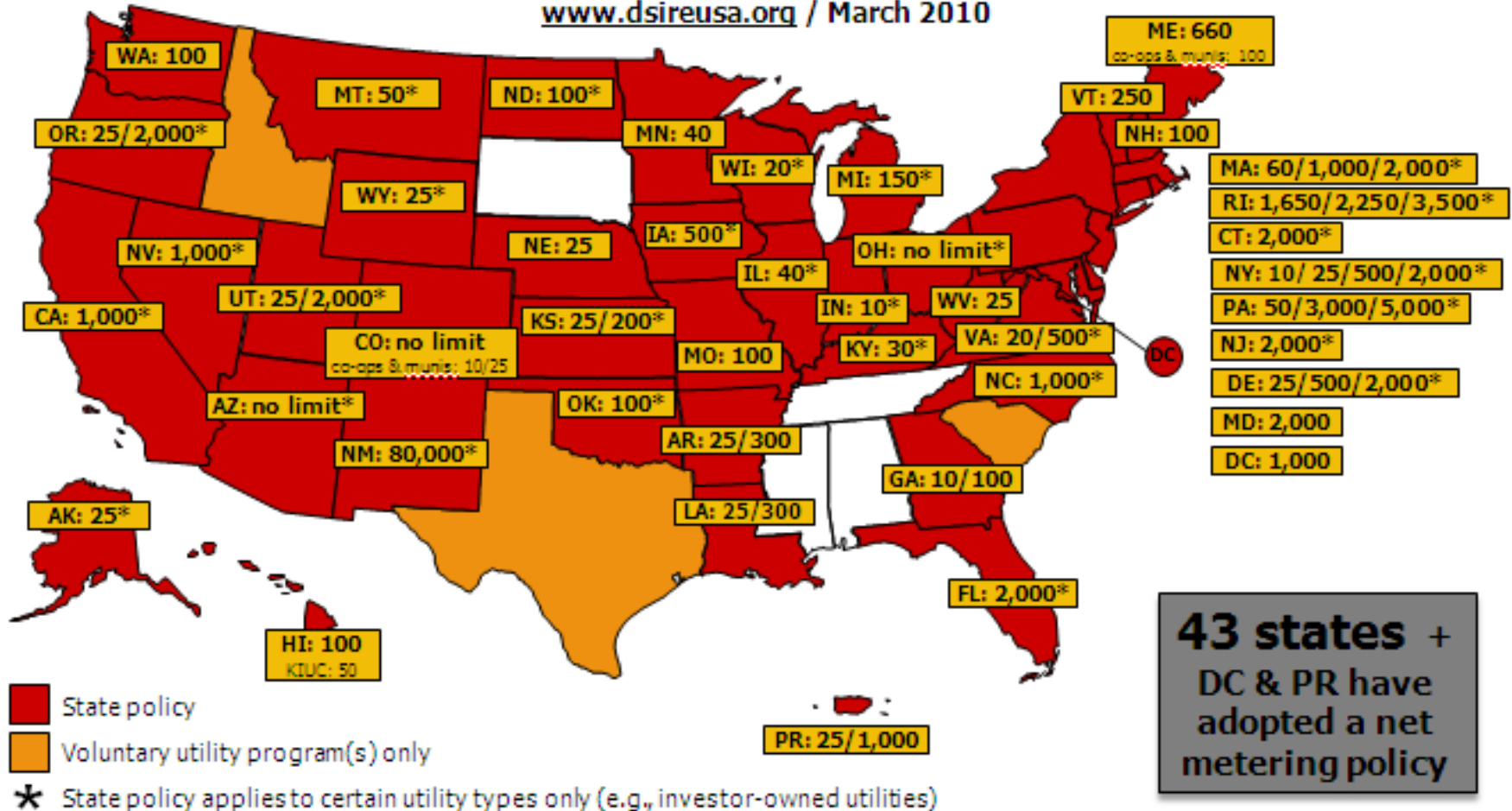


Energy Used – Energy Exported = Energy Billed



## Net Metering

[www.dsireusa.org](http://www.dsireusa.org) / March 2010



Note: Numbers indicate individual system capacity limit in kW. Some limits vary by customer type, technology and/or application. Other limits might also apply.

# How It Works in California

- For renewable energy systems up to 1,000 kW
- Solar, wind, biogas, and fuel cells are eligible
- For PG&E, rates based on retail rate schedule of customer's choice either Baseline or Time-of-Use
- Annual accounting of energy use with extra accumulated credits lost at year end
  - CPUC changing in 2011 to allow opt-in for annual compensation for excess credits (AB 920)
- Minimal grid connection (one-time, up to \$230) and monthly non-energy charges

# PG&E's NEM Rates

(\$/kWh)	E-1	E-6	E-7
Energy Rate Component	\$0.04-0.25	\$0.09-0.68	\$0.09-0.67
Non-Energy Rate Component	\$0.08		

- Residential customers pay monthly or annually for energy consumed and all non-energy charges
- Any monthly overpayment accounted for and credited in annual settlement
- For net zero system non-energy charges cost \$45-\$50 annually

# NEM vs. Feed In Tariffs

Net Energy Metering	Feed In Tariff
Smaller Systems (Less than 1 MW)	Larger Systems (Up to 20 MW)
Retail Rates	Avoided Generation Cost Rates
1 Meter Required	2 Meters Required
1 Price for Net Energy Consumed	Different Prices for Energy Consumed and Produced
No Contract	Long-Term Contract
Widely used in US, Australia	Widely used in Europe

# Other States' Net Metering Programs

- System Size Options
  - 25-300 kW limit (residential/commercial)
  - 1,000-3,000 kW limit (industrial/utility-scale)
  - No limit
- Rates Options
  - Time of use rates (CA POU's)
  - Hourly incremental or avoided costs (CO/NJ)
  - Full retail rates for first 500 kW, 50% above (TX)
- Rollover Options
  - Monthly vs. annual settlement
  - Infinite rollover
  - Annual payment

# Questions?

