



Update on Austin Energy Solar and Leasing

Presentation to CCAE
December 4, 2014

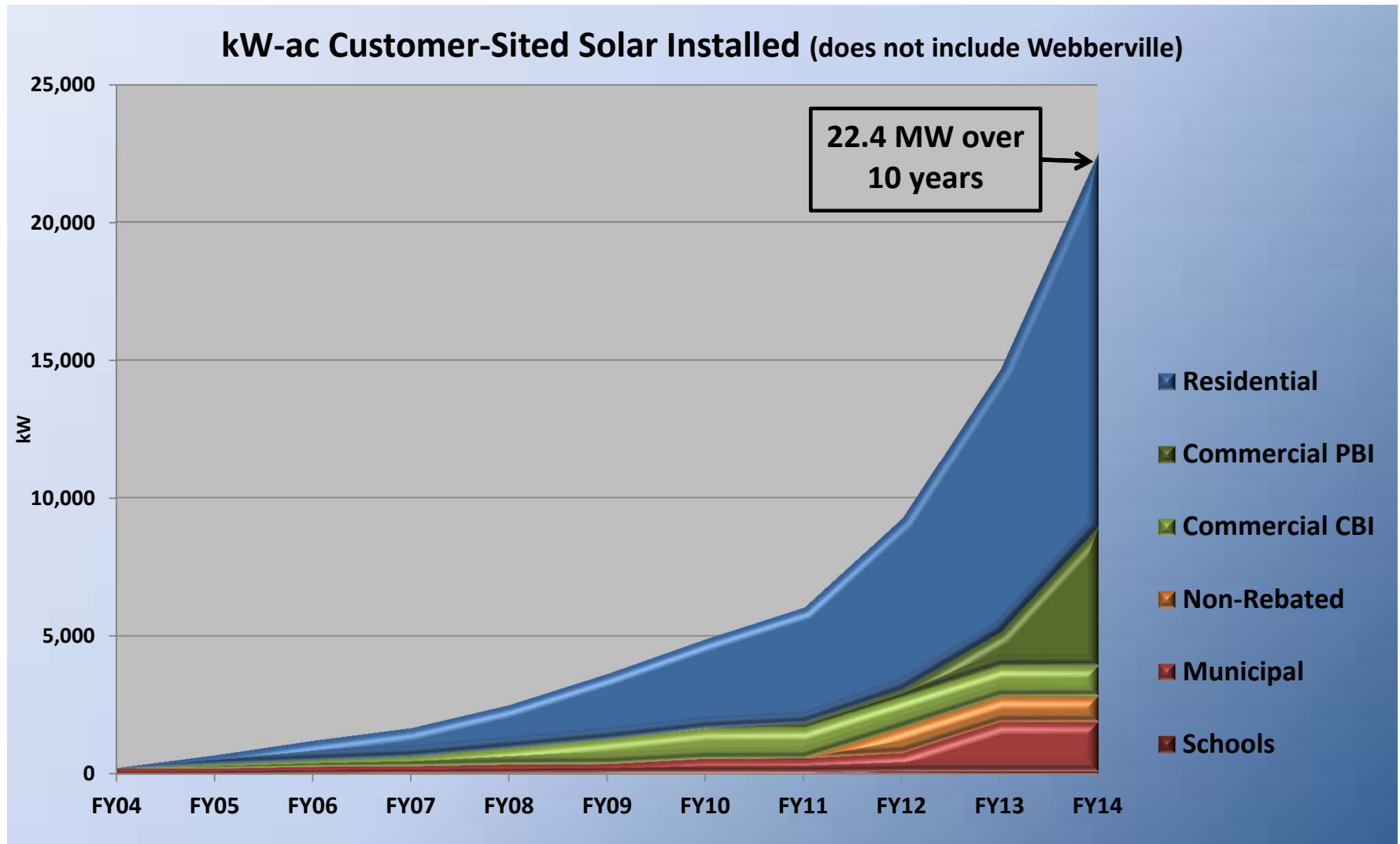


CLEAN, AFFORDABLE, RELIABLE ENERGY AND EXCELLENT CUSTOMER SERVICE





Local Solar Growth 2004-2014





AE Solar Highlights

- Lowest installed costs in the country
- 10 year rebate history:
 - \$43M for 3,477 residential projects to date
 - \$21M for 191 commercial projects committed to date
- Pioneered Value of Solar, promoting conservation and improving equity among customers
- 30% of Texas solar is in AE territory!
- Developed strong local solar market, with 40+ solar companies

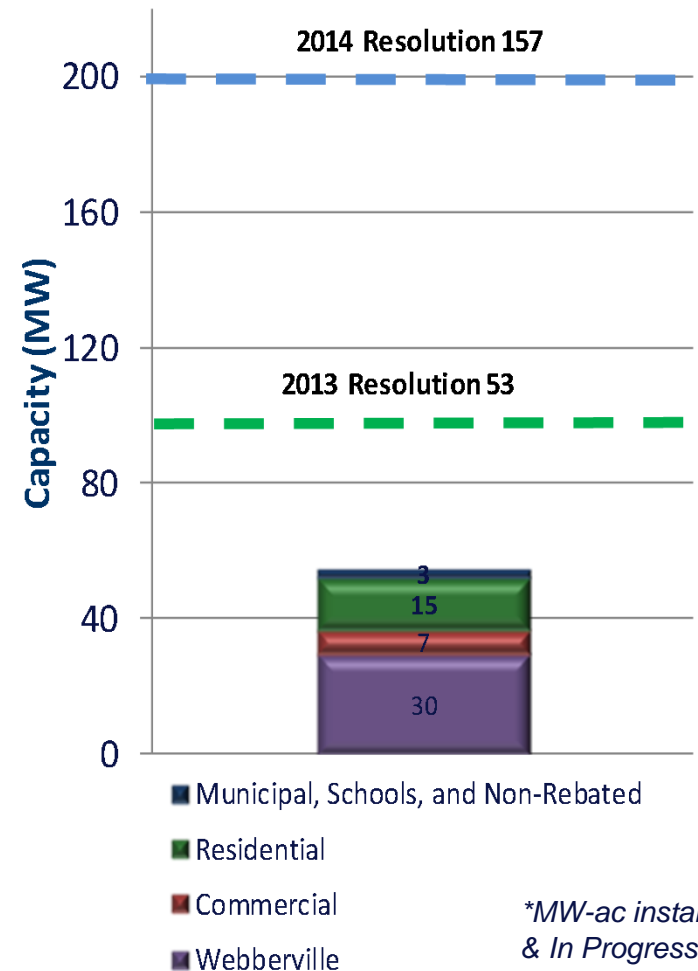




Local Solar Goals

- 2020: Austin Energy Resource, Generation & Climate Protection Plan
 - **200 MW solar goal** adopted from 2007 Climate Protection Plan
- October 2013: Council Resolution 53
 - Amended Generation Plan to include **100MW carve out for local solar**, half of which “customer-owned”
- August 2014: Council Resolution 157 increased renewable energy and solar goals
 - Increased local solar goal to **200 MW by 2020**, with at least 100 MW “customer-controlled” (behind-the-meter)

Progress Toward Local Goals*



*MW-ac installed & In Progress as of 12/1/14





Progress to Date on Resolution 157

Changed the Residential Value of Solar Tariff to:

- Remove the year-end credit sweep;
- Allow VOS credits to apply to customer's other onsite residential electric services (e.g. nightwatchman)
- Remove 20 kW tariff cap;
- Expand VOS credits to customers with solar equipment leases;
- Adopt 5-year rolling average in calculating VOS rate, increasing VOS to 11.3¢/kWh effective January 2015

In Progress:

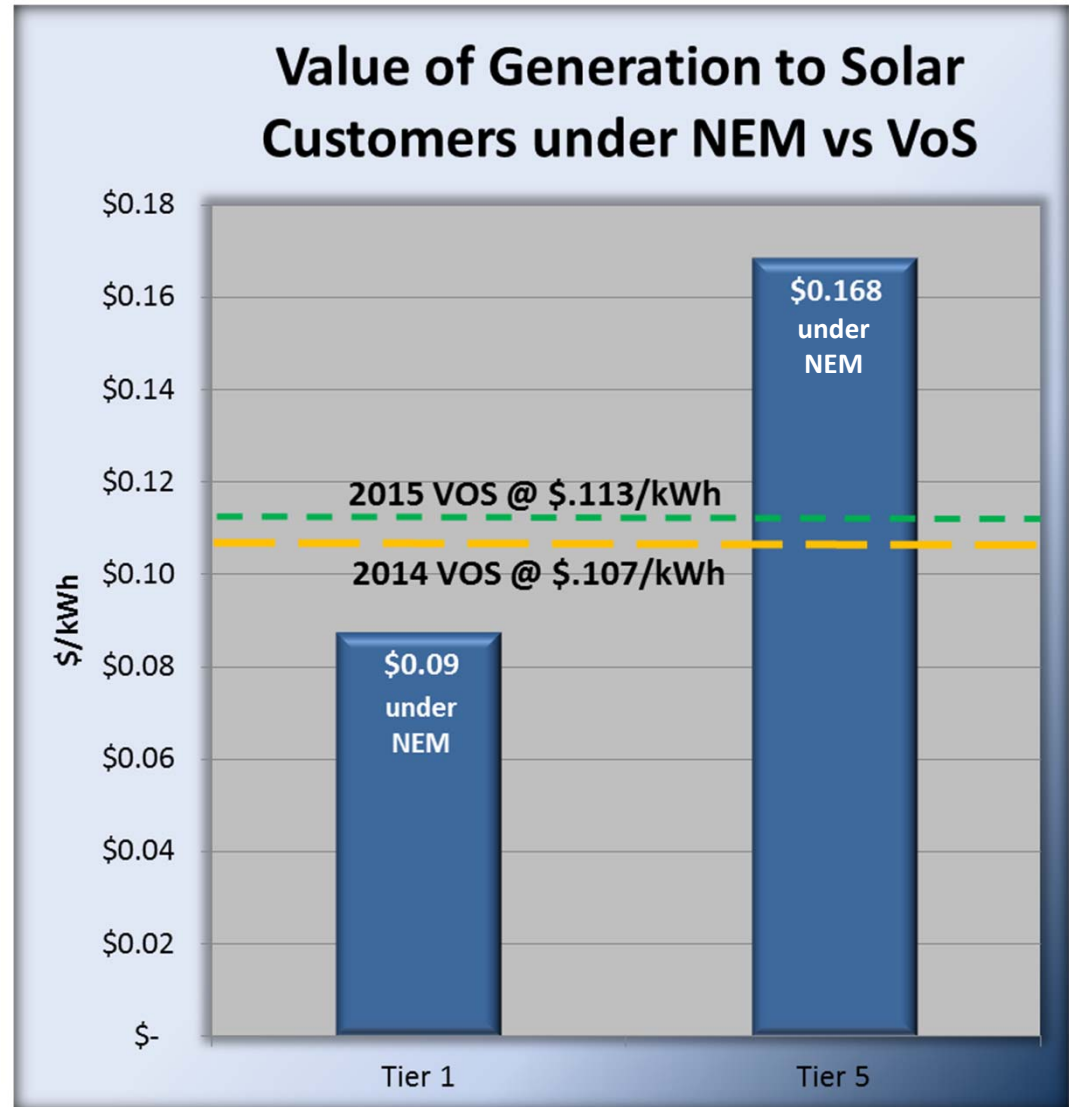
- Set a floor on the VoS factor;
- Update natural gas projection methodology in next VOS assessment for consideration by Council
- Reviewing incentives for leased systems





VoS addresses several challenges of Net Metering

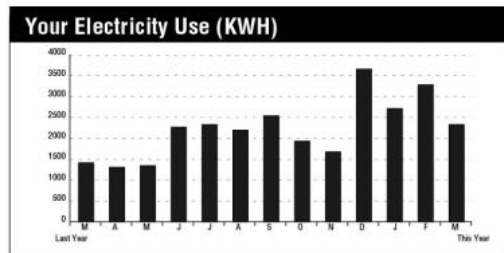
- Recovers fixed costs
- Improves equity
 - Between solar customers
 - Between solar and non-solar customers
- Better reflects value of local generation
- Promotes efficiency & conservation





Understanding the Residential Solar Bill

Service Details



Days of service 30
 kWh used 2332
 Avg. kWh per day 77.7
 Avg. cost per day \$8.93
 13 month avg. consumption: 2231.23

The solar customer is billed on Whole House Consumption under five tier rate schedule. Whole House Consumption is calculated by adding the net energy consumed from the grid to the PV production.

The solar customer is then credited for their PV production at the Value of Solar Rate.

If the Total Current Charges result in a negative amount, a credit will roll forward to the next month's bill.



ELECTRIC SERVICE

PowerLink Number: 0000000000
111 Anywhere Street

Meter

Read Date	02/15/2014	03/17/2014	Read Diff.
Delivered Read	38358	40849	2491
Received Read	471	631	160
Net Read	37886	40218	2332

Meter

Read Date	02/15/2014	03/17/2014	Generation
Solar PV Read	9372	9815	443
Total Generation in KWH			443

Whole House Consumption in kWh

COA - Electric Residential	
Customer Charge	\$10.00
Tier 1 first 500 kWh at \$0.018 per kWh (winter)	\$9.00
Tier 2 next 500 kWh at \$0.056 per kWh (winter)	\$28.00
Tier 3 next 500 kWh at \$0.0717 per kWh (winter)	\$35.85
Tier 4 next 1,000 kWh at \$0.0717 per kWh (winter)	\$71.70
Tier 5 remaining 275 kWh at \$0.0717 per kWh (winter)	\$19.72
Regulatory Charges 2,775 kWh at \$0.00794 per kWh	\$22.03
Temporary Regulatory Charge 2,775 kWh at \$0.00057 per kWh	\$1.58
Community Benefit Charges	\$14.37
Power Supply Adjustment 2,775 kWh at \$0.03709 per kWh	\$102.92
Solar Credit 443 PV kWh at \$-0.107 per kWh	-\$47.40
Residential Sales Tax	

TOTAL CURRENT CHARGES **\$267.77**

Want to save money on your electric bill? Visit austinenergy.com for information on our rebate programs and energy saving tips.





Residential Solar Rate Stability

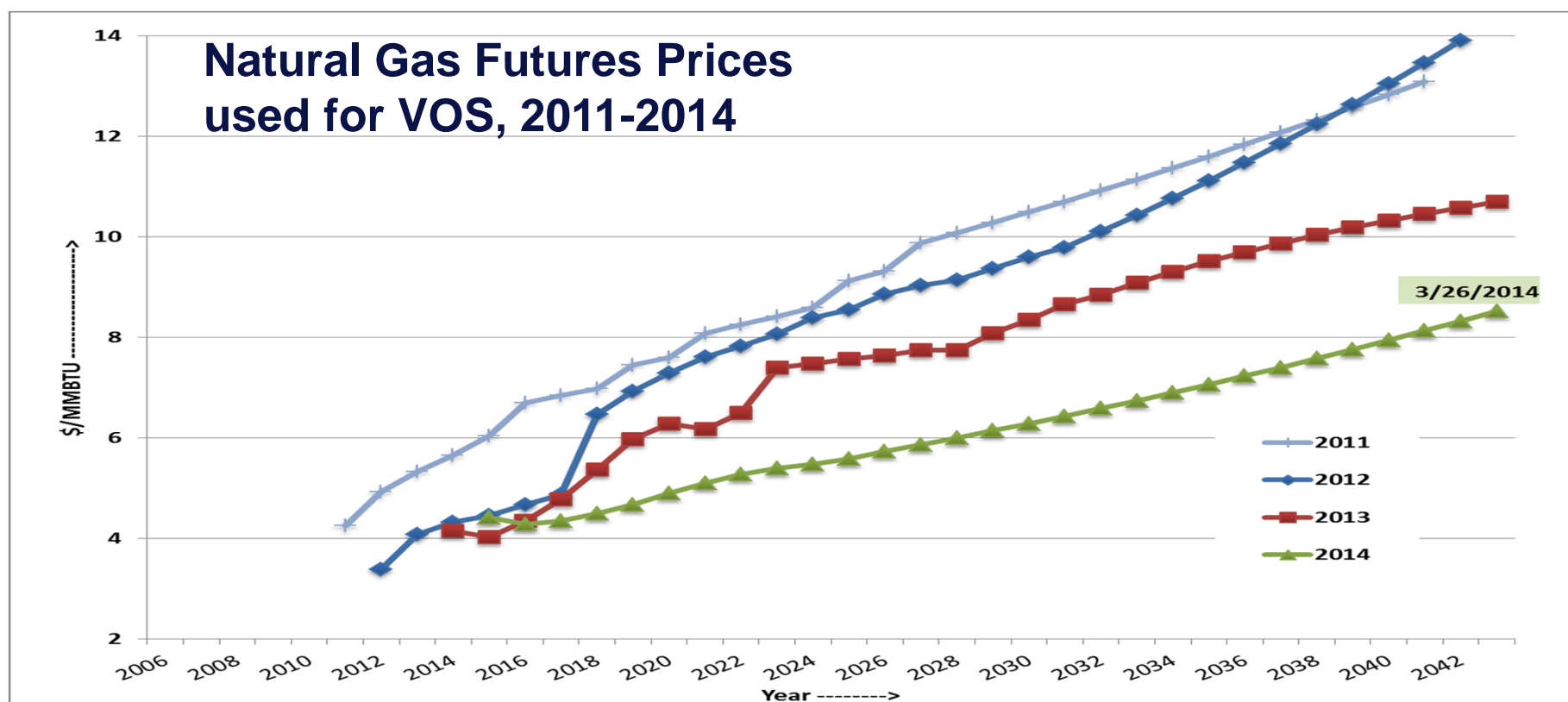
- Solar rate volatility has been a concern to solar customers and contractors
- New “rolling average” methodology will smooth rate changes, dampen impact of year-on-year natural gas futures fluctuation
- **“VoS Factor”** used to calculate solar credits will be based on 5 year rolling average **annual “VoS assessment”**
 - VoS Factor for the next year = average of forward year VoS assessment & past 4 years’ VoS assessments
- VoS Factor of 11.3 ¢/kWh effective January 2015





VoS & Natural Gas

- The avoided fuel cost component accounts for over half of the VoS
- This component is driven by the projected future price of natural gas
- Natural gas futures prices have dropped each of the last 4 years





2015 VoS Factor Adopted by Council

Rolling average calculation in practice:

2015 Residential Solar Rate Calculation			
	Avg Gas Price (over 25 yrs)	VOS Assessment	# months
2012	\$ 9.19	12.8	3
2013	\$ 8.83	12.8	12
2014	\$ 7.90	10.7	12
2015	\$ 5.91	10.0	12
Total			39
2015 VoS Factor		11.3	





Why do VoS and PSA natural gas components differ?

- Power Supply Adjustment looks backward over last 12 months
 - Reflects actual market purchases, fuel costs and operation of generating assets
 - Reflects over / under collections
- Value of Solar looks forward over 25 years
 - Attempts to quantify value at which the utility is “neutral” to paying for locally generated PV
 - Avoided fuel value is based on today’s price for long-term gas supplies
 - Value has fluctuated historically, primarily driven by *forecasted* natural gas market changes
- While current natural gas prices have increased recently, the projected rate of future increases has come down
 - Gas is still projected to be more expensive in the future than today, but less expensive than previously thought





Incentives for Leased PV Systems

Resolution 157 directs AE to provide incentives to third-party leased PV system hosts.

- Non-profits with leased systems can already receive PBI
- Will consider PBI incentive for other commercial leased systems in 2015 (with new incentive processing platform)
- Residential leased systems will receive VOS in 2015
- Residential leased systems ineligible for rebates
- Exploring additional financing options for our customers, including PACE, bank/credit union loans





Residential Solar Leasing & Incentives

- Leasing makes solar financially viable for residential customers without local incentives.
 - Solar leasing removes the upfront cost hurdle
 - In addition to the 30% federal investment tax credit, solar leasing companies take advantage of federal accelerated depreciation, reducing the cost by another ~30%
 - Without local incentives, leasing companies can take a larger federal tax credit based on full installed cost





Leased Residential Systems Receive More Subsidy than Residential Self-Owned Systems

Residential Solar w/AE Rebate

System size kW-DC	5.0
System size kW-AC	3.9
Cost per Watt-DC	\$3.35
AE Rebate Level (\$/W)	\$1.10
Installation Cost	\$16,750.00
AE Incentive Amount	\$5,252.50
Federal Tax Credit	\$3,449.25
MACRs NPV (Depreciation)	\$ -
Total Out of Pocket	\$8,048.25
Annual Solar Benefit (VOS credits)	\$769.08
Simple Payback (yrs)	10.46

Residential Lease w/out AE Rebate

System size kW-DC	5.0
System size kW-AC	3.9
Cost per Watt-DC	\$3.35
AE Rebate Level	\$ -
Installation Cost	\$16,750.00
AE Incentive Amount	\$ -
FTC	\$5,025.00
MACRs NPV (Depreciation)	\$4,503.00
Total Out of Pocket (for Leasing Co)	\$7,222.00
Annual Solar Benefit (VOS credits)	\$769.08
Simple Payback (yrs)	9.39

Federal Incentives: \$3,450
AE Rebate: \$5,250
Installed Cost after Incentives: \$8,048

Federal Incentives: \$9,528
AE Rebate: \$0
Installed Cost after Incentives: \$7,222





Austin Continues to Lead the Way on Solar

- Solar uptake continues to grow
- Strong local industry creating local jobs
- VOS removed inequities of NEM, promotes conservation



- VOS rolling average will improve rate stability
- Equipment leases now enabled, allowing customers without upfront capital to go solar

