

# Minnesota

# Solar Market Update

December 4, 2014

Renewable Energy Markets Conference

Lise Trudeau

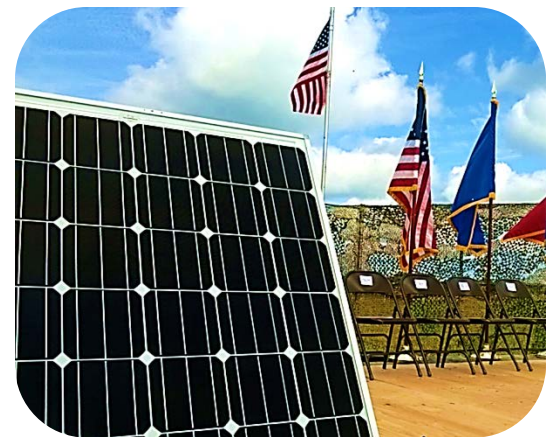
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# 2013 Distributed Energy Legislation

- Solar Electricity Standard
  - **IOU 1.5% x 2020**
  - **10% of the 1.5% from <20kW installations**
- Net Metering cap of 1,000 KW
- Performance-Based Incentives
  - Xcel Solar Rewards
  - Made-in-Minnesota
- Community Solar
- Value of Solar



# How Much PV Capacity due to the 1.5% Solar Electricity Standard?

Utility	Capacity (MW)
Allete	7.5
Alliant	33
Ottertail Power	28
Xcel Energy	300
Total	369

Per Docket 14-321

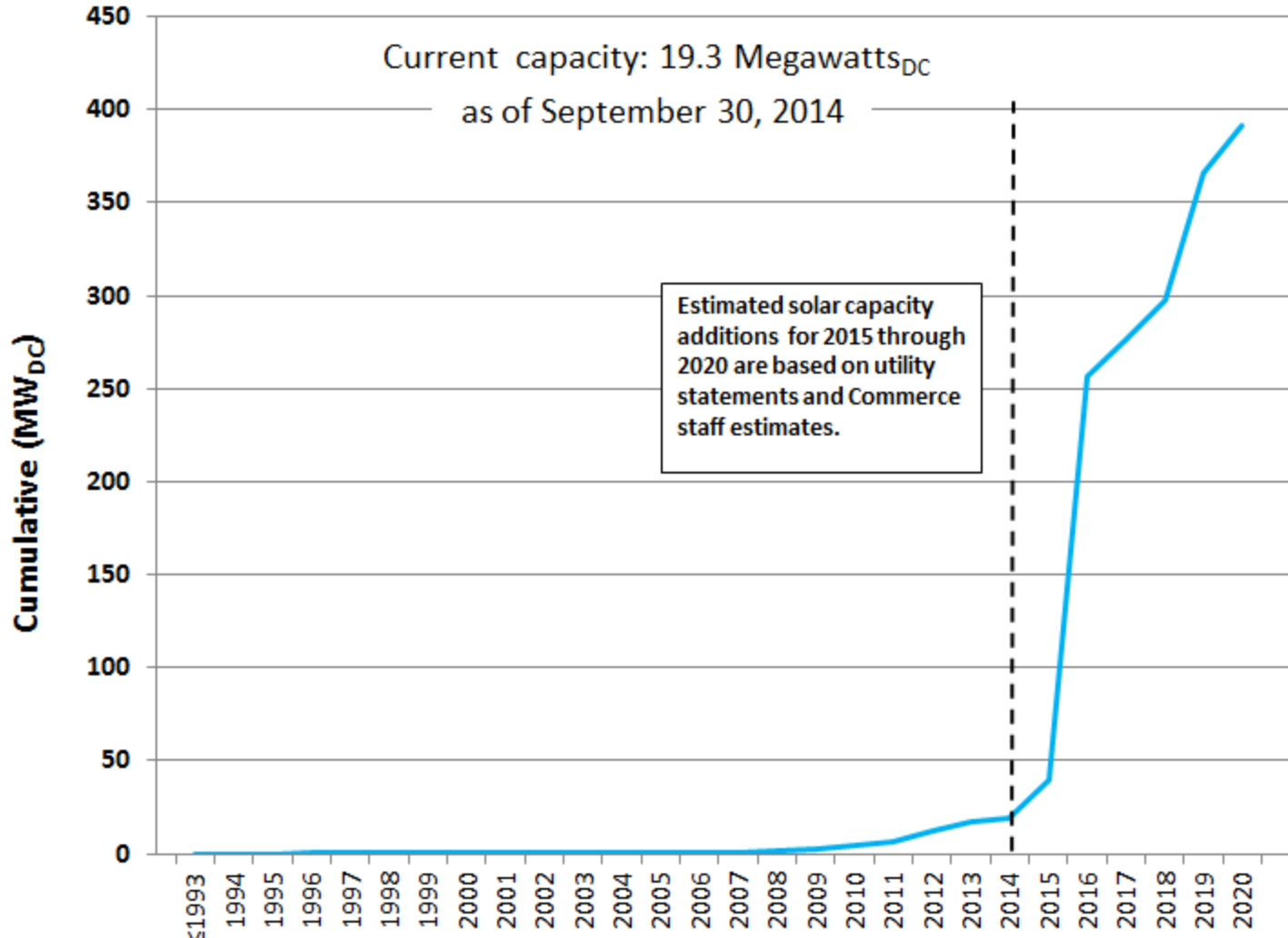
Today: 19 MW<sub>DC</sub>

2020: **350 - 400 MW<sub>DC</sub>**

- including 35-40 MW<sub>DC</sub> from installations <20kW

[2030: 10 % Solar Electricity Goal, 6-8 GW]

# Minnesota Capacity Estimate 2020



# REC Ownership

- Solar Electricity Standard - need RECs to comply
- Net Metering – not specified
- Performance-Based Incentives
  - Xcel Solar\*Rewards - utility owns RECs for 10 yrs
  - Made-in-Minnesota - utility owns RECs for 10 yrs
- Community Solar – 2-3¢ payment for RECs
- Value of Solar – utility owns RECs

# VOS Methodology

## Development and Review Process

**The Department of Commerce designed and led an extensive stakeholder process in Fall 2013, incorporating significant national experience and expertise including:**

- Clean Power Research – technical and analytical support
- Rocky Mountain Institute – Meta-analysis of Solar PV Benefit & Cost Studies
- Rabago Energy – Austin Energy VOST experience

# Value of Solar Methodology

Must include value of:

**energy and its delivery,  
generation capacity,  
transmission capacity,  
transmission and distribution line losses, and  
environmental value**

Commerce developed a draft methodology and submitted it to the PUC in January.

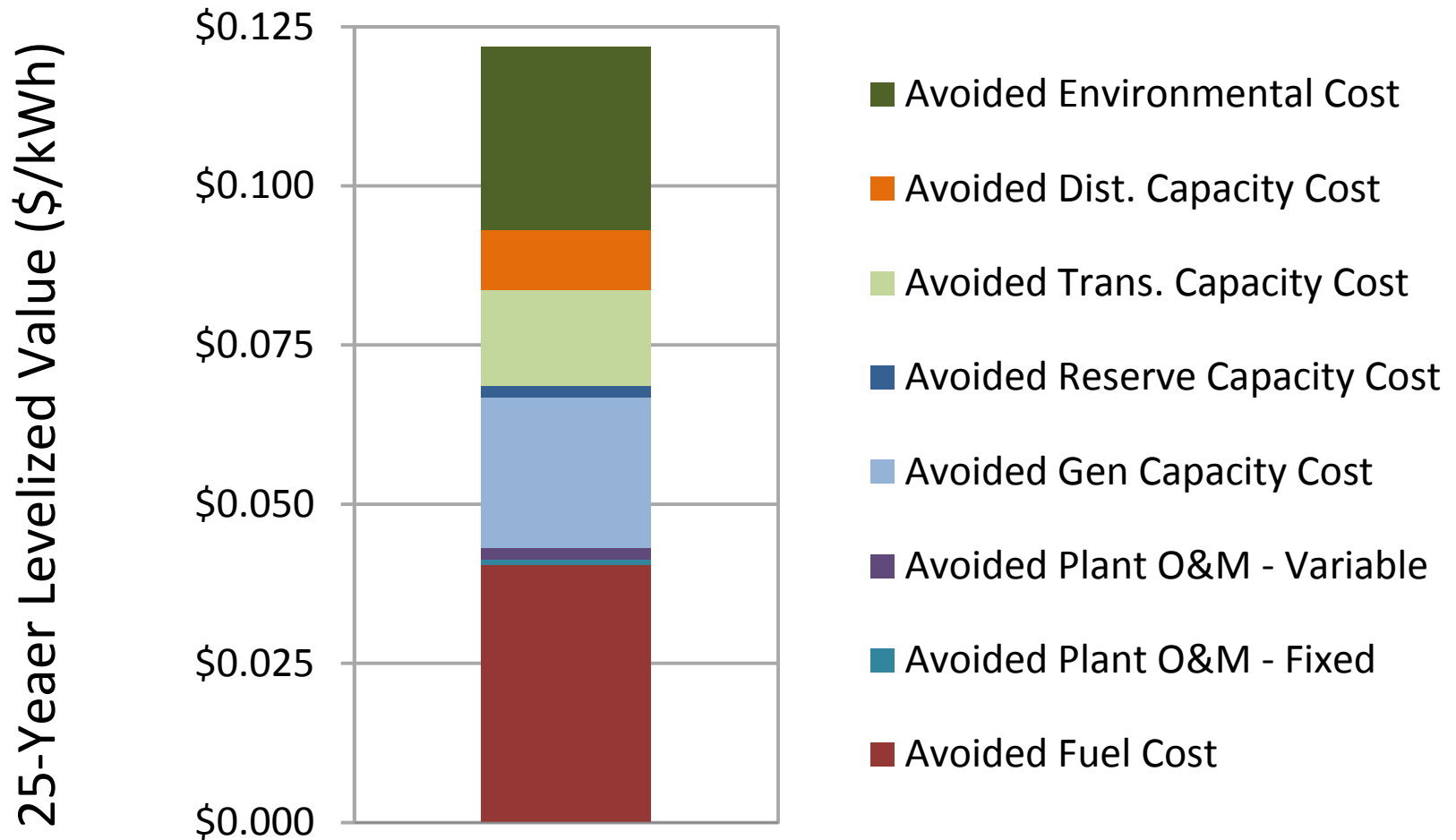
**On March 12, 2014, the MN Public Utilities Commission voted to approve the Methodology.**

# Value of Solar – Key Points

- **Separates customer electricity usage and production:**
  - Customers are billed for all electricity usage under their existing applicable tariff and are credited for all solar energy production under the approved VOS tariff.
- **Is not an incentive for distributed PV, nor is it intended to eliminate or prevent current or future incentive programs.**



# Preliminary Results for MN VOS



Preliminary VOS Calculation for Xcel Community Solar Gardens

Source: MN PUC Briefing Papers, July 25, 2014, Docket No. 13-867

# Value of Solar – Next Steps

- Dec. 1, 2014: PUC Comment period ended in Docket 13-867 on an appropriate VOS adder for a financeable rate for Community Solar
- Mar 1, 2015: Xcel to file updated VOS calculation in Docket 13-867
- Will utilities opt for VOST as an alternative to net metering?

# More Information...

- Workshop presentations, stakeholder comments, draft, and final methodology are posted on the Commerce website at:  
[www.energy.mn.gov](http://www.energy.mn.gov)
- Search for:
  - **“MN VOS”**, or
  - **“MN Energy Legislation Initiatives”**



Energy Legislation Initiatives

Information on energy legislative initiatives in Minnesot

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