Solar Electricity In Vermont

Challenge & Opportunity

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The Good News

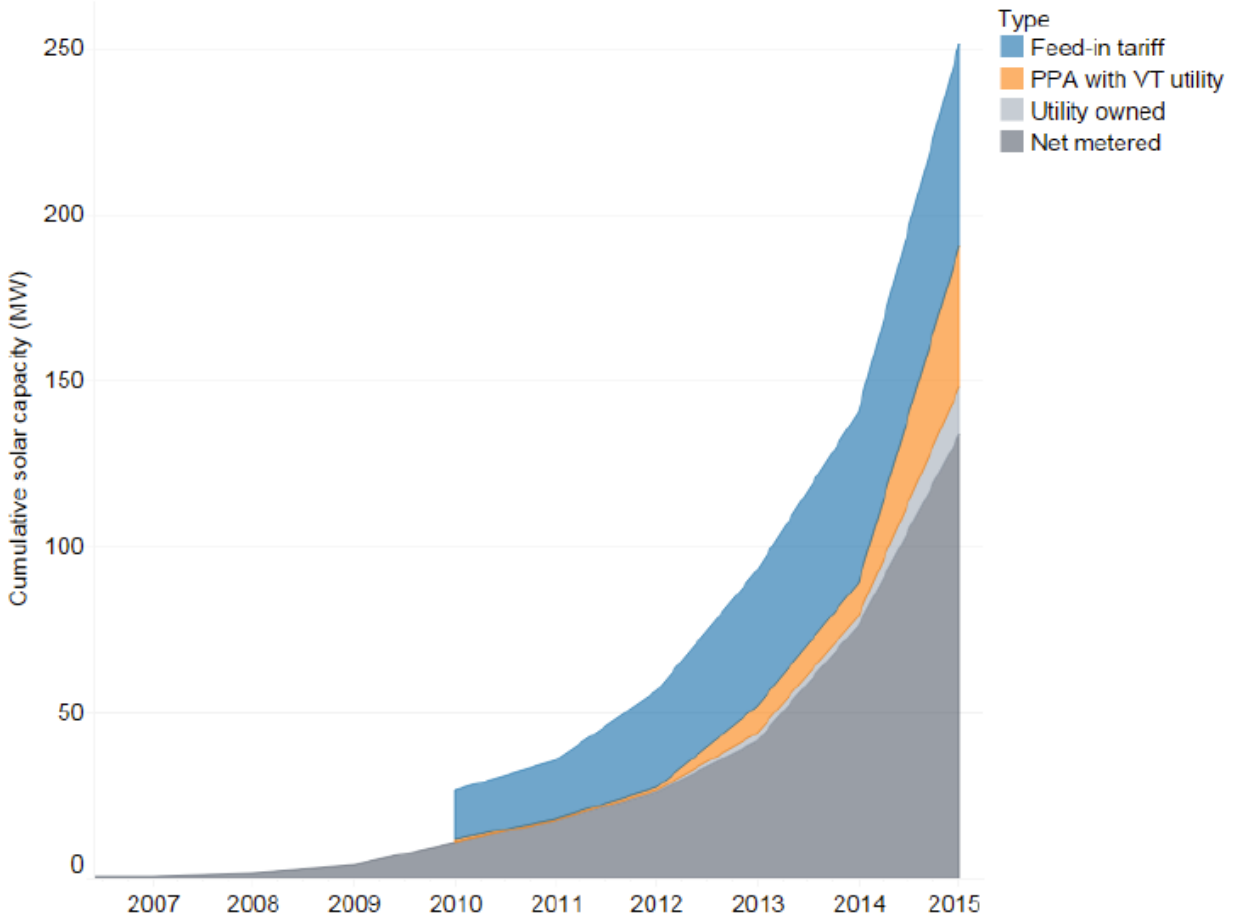
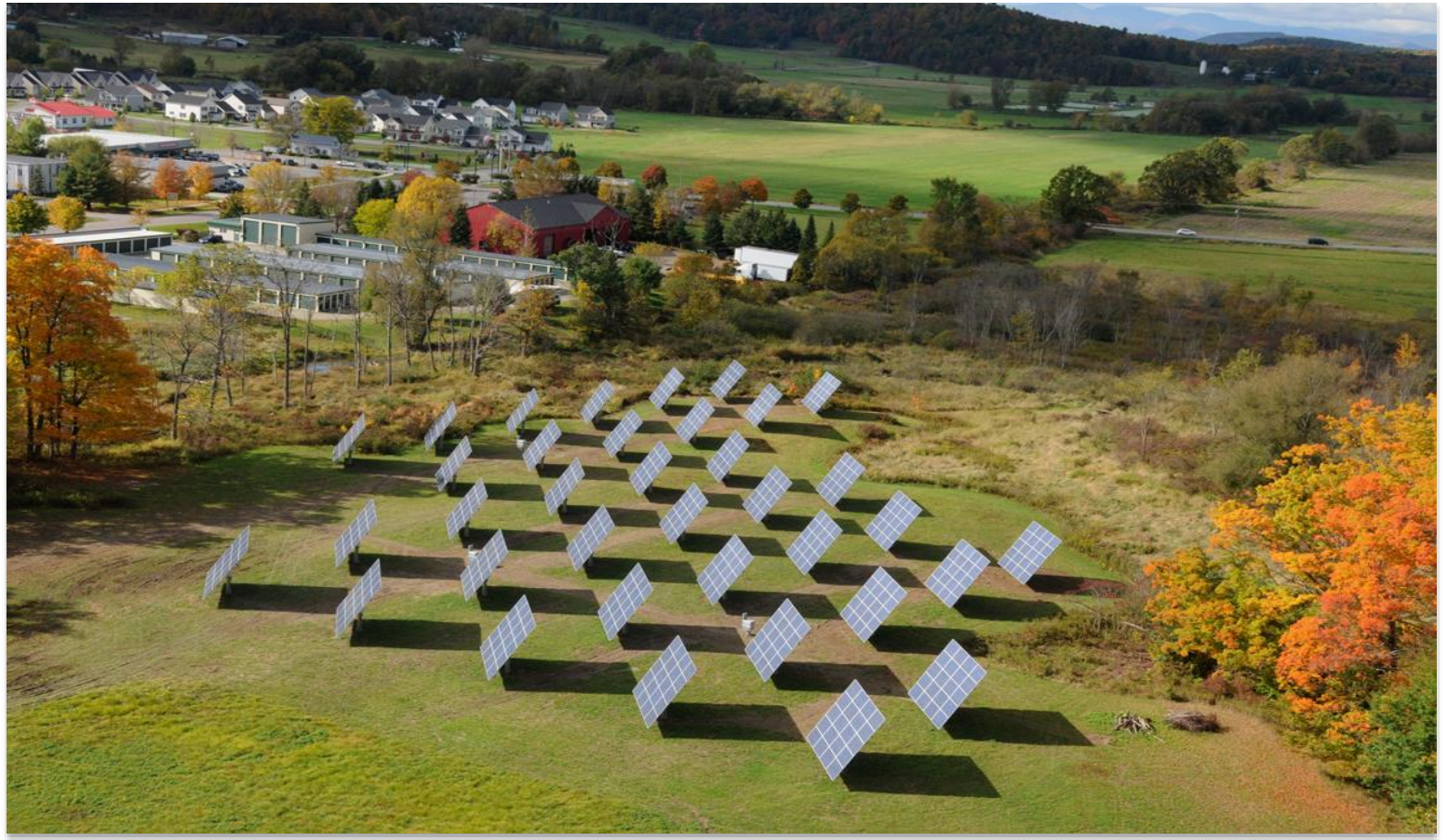


Figure 4. Cumulative permitted solar capacity in Vermont has grown quickly in the last five years, reaching 251 MW by the end of 2015.

150 KW Solar Tracker Orchard

Largest size array allowed under simplified 248 permitting (called Category 2 as of 2017)



AllEarth Renewables, 5 KW trackers, Hinesburg, VT

500 KW Community Solar Array

Largest size array allowed under VT Net Metering rules (except for landfill sites).

"South Ridge" Middlebury, VT. Encore Development

The New “Working Landscape”

Agriculture and Solar Plants can work together

- Zero Emission
- No Fuel Cost
- No Noise
- Animal friendly

What Community Solar Has Accomplished

- Access to solar for all – Majority of Vermonters have access to solar power and savings of 10 to 15% on utility bills
- Peak demand reduction for utilities & VELCO saving hundreds of million of dollars for ratepayers
- Local community tax base increase of approximately $600M
- Thousands of jobs in engineering and installation

…but it has also raised concerns about land-use planning

Changing Incentives for Solar (based on GMP territory)

- **Cat 1: 15 kW and under, located anywhere**
  - Current rate $.215/kWh, 2017 rate $.185/kWh, decrease of 14%
- **Cat 2: 15 – 150 kW, located on building or preferred site**
  - Current rate $.19/kWh + $.04/kWh REC
  - 2017 rate $.185/kWh & no RECs, decrease of 20%
- **Cat 3: 150 to 500 kW, located on building or preferred site**
  - Current rate $.19/kWh + $.04/kWh REC
  - 2017 rate $.165/kWh & no RECs, decrease of 28%
- **Cat 4: 15 to 150 kW not meeting siting requirements**
  - Current rate $.19/kWh + $.04/kWh REC
  - 2017 rate $.145/kWh & no RECs, decrease of 37%

Preferred Sites

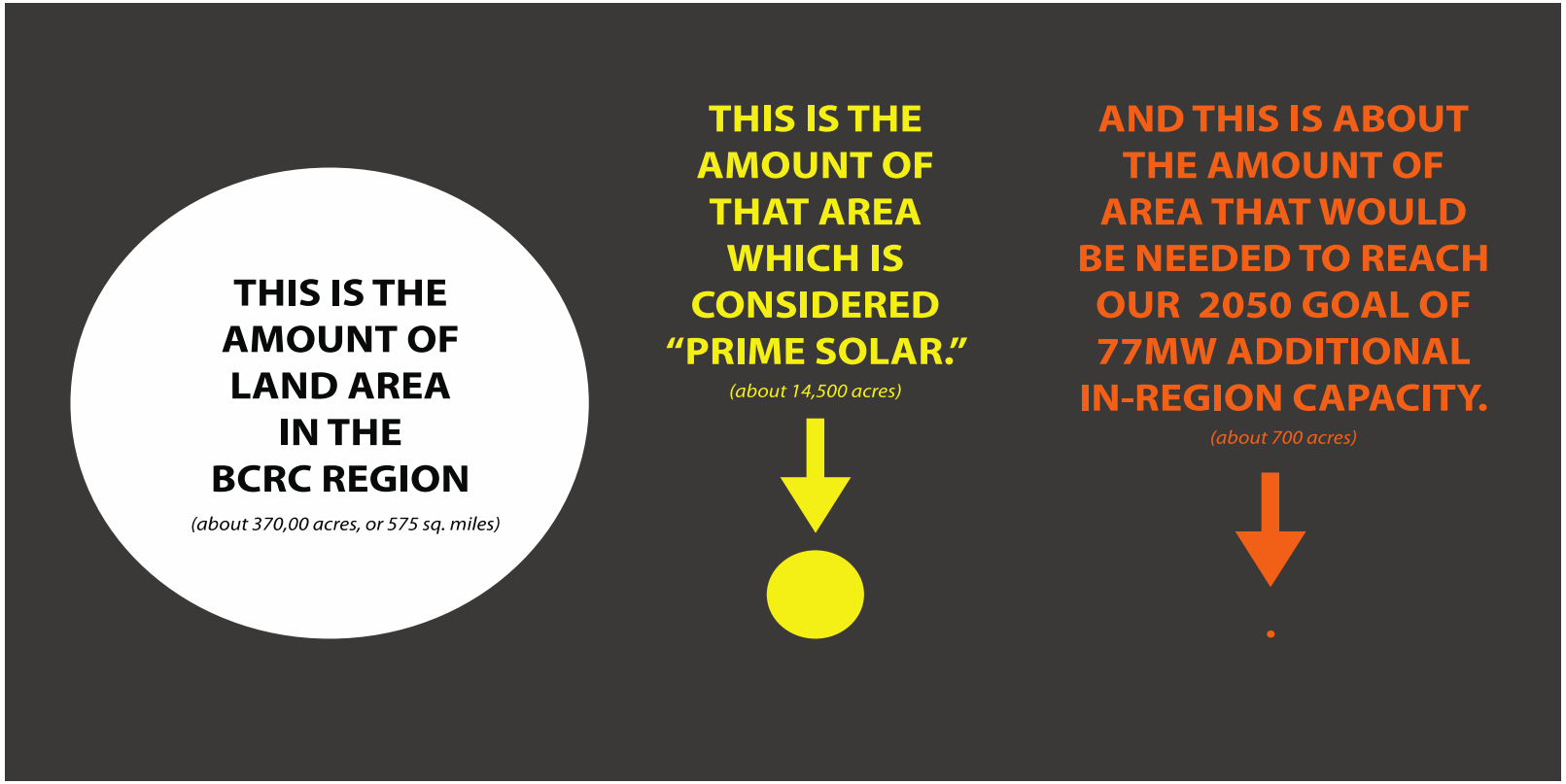
- Goal – site solar on buildings, developed infrastructure, or brown field sites
- Sensible goal but it has economic consequences:
  - Commercial Rooftop – 20% more expensive per lifetime kWh
  - Parking Canopies – 40% more expensive per lifetime kWh
    - * compared to 500 kW open field installation
- Open field sites will remain preferred lowest cost, highest output development sites.

ACT 174

Integrated Land Use & Energy Planning

- Analysis & Targets, Pathways, and Mapping
- Covers both Regional and Municipal planning
- Plans must be approved by PSD to achieve "substantial deference" before the PSB
- Town-designated preferred sites may be one of the few pathways to develop projects larger than 150 kW

BCRC – Reaching Regional 90 X 2050



…And about 44% of total solar goal could potentially be met through rooftop solar

The Challenge: Getting to 90% by 2050

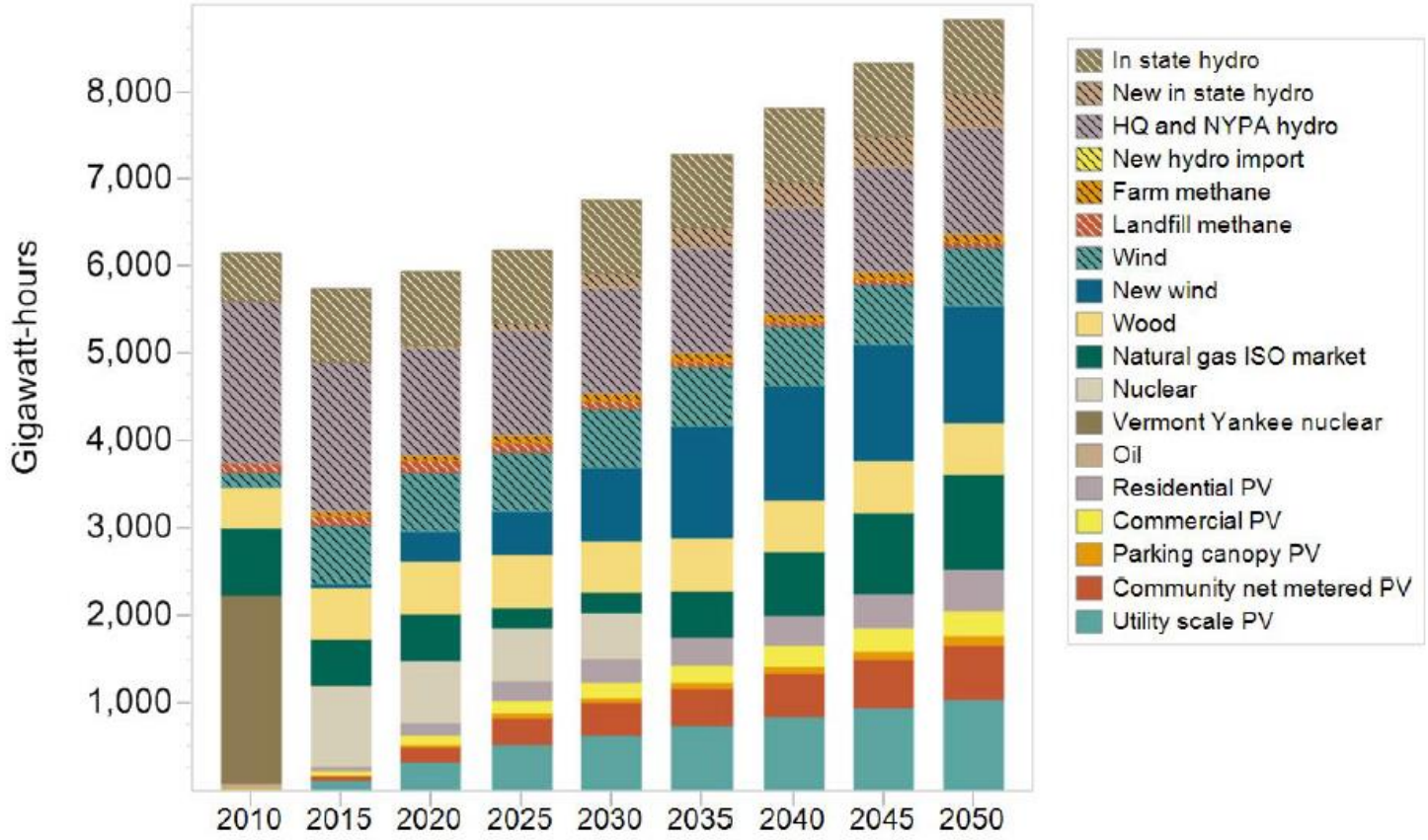


Figure 3. Actual and projected Vermont electricity supply in the Solar Development Pathways scenario, by 5-year increments, and by energy source.