Senate Natural Resources & Energy Committee

Washington Electric Cooperative

January 27, 2016
Patty Richards

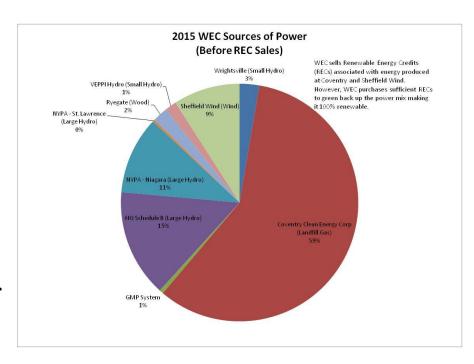
About WEC

- Electric Cooperative Not for Profit
 - Established in 1939
- Peak 16 MW (Winter)
 - State of VT ~ 1,000 MW Peak (Summer)
- 70,000 MWH Retail Sales Annually
- 1% of State Load
- 11,000 members
- 41 towns 4 counties Central Vermont
- 96% of our members residential
- Very rural and little commercial base
 - WEC 8 members per mile
 - GMP is 20 customers per mile
 - BED 87 customers per mile
- WEC largest cost driver is infrastructure (wires, poles, substations, etc)
 - Power Supply Costs ~ 7 cents/kWh
 - All other costs ~ 14 cents/kWh
- Average residential user ~ 500 kWh per month (12% less than statewide avg)



About WEC

- WEC supports renewable power
- WEC Supports Net Metering
- Before REC sales 125% renewable sources
 - Instate sources of power70%
- Early adopter of Energy Efficiency since 1991



Net Metering

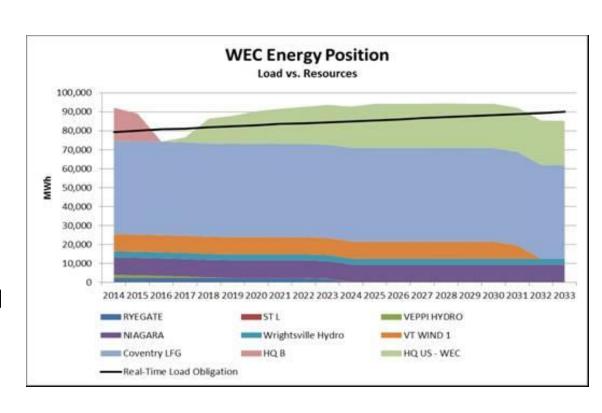
| | | | | | Oct 2014 - |
|----------------------|----------------------|---------------------|-----------|------------|------------|
| | | | | 1996 Peak | Oct 2015 |
| | | | | kW | Peak kW |
| | | | | 13,096 | 15,914 |
| | | | | | |
| | Legacy Net | | | | Percent of |
| | Metering | New Net Metering | Total Net | | last 12 |
| | (installations prior | (Installations July | Metering | Percent of | month |
| | to Oct 2013) kW | 2014 to date) kW | kW | 1996 Peak | peak |
| CPGs Awarded | 1,396.60 | 333.39 | 1,729.99 | 13% | 11% |
| Systems Connected | 1,396.60 | 272.55 | 1,669.15 | 13% | 10% |
| Applications Pending | - | 60.84 | 60.84 | 0% | 0% |

Net Metering

- Legacy (prior to Oct 2013)
 - 203 Members
 - Avg 6.0 kW
 - Max 57 kW
 - Min 0.6
- New Net Metering Program (July 2014 forward)
 - 49 Members
 - Avg 6.9 kW
 - Max 34 kW
 - Min 1.8 kW

WEC Existing Power Supply Commitments Long Term

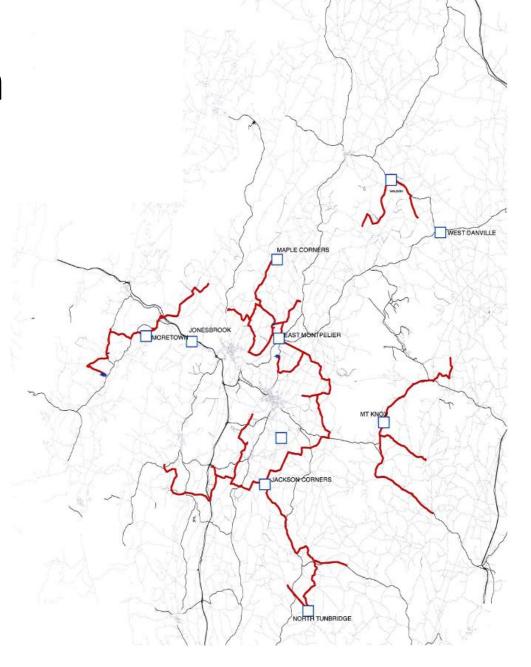
- Net Metering:
 - No offset to WEC's future sources of power
- Long term WEC is excess
- WEC future sources renewable based
 - Net metering more powerful for those utilities that need new sources of power
- WEC already met/exceeded state goal of 90% renewable
- Net Metered energy offset to other Renewables



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WEC's system

- WEC 3 Phase Lines in red
- Light gray other lines
- 1,263 miles overhead line
- 151 miles of 3 phase (12% of overhead wires)



Cost of Three Phase Lines

- One project cost \$600,000
 - 7.5 miles of 3 phase line upgrade
 - Standard Offer project
 - 3.5% rate increase if WEC members had to pay
 - WEC gets no benefit from Standard Offer projects
- Many projects will cause severe rate impacts if cost passed on to WEC members
- Larger renewables can afford to pay for upgrades
 - 2.2 MW Solar between 11.9 and 13.4 cents per kWh
- WEC already 100% renewable

| 2014 STANDARD O | | | | | |
|------------------------------|-----------------------------------|-----------|------------|------|-----------|
| | | | | SIZE | PRICE |
| DEVELOPER | PROJECT NAME | LOCATION | TECHNOLOGY | (MW) | (\$/kWh) |
| | | | | | |
| | | | | | |
| | | | | | |
| AWARD GROUP | | | | | |
| HelioSage, LLC | Whiting Solar Center | Whiting | SOLAR | 2.2 | \$ 0.1187 |
| HelioSage, LLC | Mountain View Solar Center | Williston | SOLAR | 2.2 | \$ 0.1198 |
| Green Peak Solar, LLC | Next Generation Solar Farm | New Haven | SOLAR | 2.1 | \$ 0.1287 |
| RESERVE GROUP | | | | | |
| Green Peak Solar, LLC | New Haven Solar Farm | New Haven | SOLAR | 2.1 | \$ 0.1327 |
| Otter Valley Solar Farm, LLC | Otter Valley Solar Farm | Florence | SOLAR | 2.2 | \$ 0.1338 |

Thank You

Patty Richards 802-224-2324 patty.richards@WEC.coop