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Agenda

New Castle Climate and Environment Commission Virtual Meeting Thursday, December 17, 2020, 6:30 PM

Due to concerns related to COVID-19, this meeting will be held as a virtual meeting only. The public is invited to attend.

[To join by computer, smart phone or tablet click HERE](#)

**If you prefer to telephone in:
Please call: 1-346-248-7799
Meeting ID: 709 658 8400**

Follow the prompts as directed. Be sure to set your phone to mute until called on.

Call to Order

Roll Call

Meeting Notice

Conflicts of Interest

Citizen Comments on Items NOT on the Agenda

Items for Consideration

- A. Presentation: Kyle & Emily Lord, Founders of Reconnect Clean Energy, on Solar Energy as an Economic Benefit and Driver of Local Economies**
- B. Update on Educational Efforts on Wildfire Response, Fire Prevention, Assessment and Mitigation**
- C. Discussion: 2021 Budget Considering the Approved Plan and Commission Goals**
- D. Consider Approval of the November 19, 2020 minutes**
- E. Consider Agenda Items for the January 21, 2021 Meeting**

Adjourn

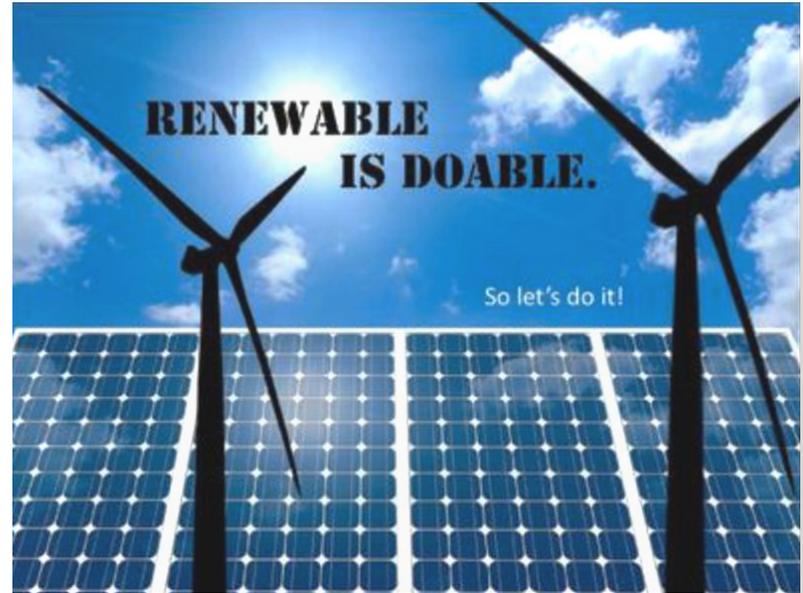


Clean Energy Revolution

Clean Energy as an Economic Driver

Agenda

- Moving to a Clean, Decarbonized Energy Future
- Utilities are Transforming
- Benefits of Solar Energy
- Economics of Solar Energy
- New Technology
- How Municipalities Can Help



Moving to a Decarbonized Future

Reducing our carbon footprint is inherently complex. In this presentation, our primary intention is to highlight how solar energy and new technology are critical elements for a decarbonized grid.

- Increase Electrification (Transportation/HVAC)
- Increase Renewable Energy Production
- Smart Energy Management



Utilities are Transforming

- Past: *Centralized* Power Plant
 - Electricity is delivered to ratepayer, often at great distances
- Present: Transitioning from *centralized* fossil fuel to *decentralized* renewables
- Future: *Decentralized* Power Plant
 - Utility becomes energy manager of all *decentralized energy* resources (wind, solar, etc)



Centralized Power Plant



Decentralized Power Plant



Green is Gold

The benefits of clean energy from solar expand beyond climate and are important to note when educating our communities.

- Lower Energy Costs
- Predictable Energy Cost
- Increases Property Value
- Community Resiliency
- Local Economic Growth



Electricity costs rise each year. They are expected to continue to rise an average of 3% annually, while the cost of solar has decreased.



Solar Programs to Save

- Net-Metering - The amount of solar energy produced minus energy consumed
- Time of Use - New Rate Structure
- Financing Options - Low interest financing making solar even more accessible
- Weatherization Assistance Program - Provides free solar systems to qualified low income residents



The Colorado RENU Loan is a statewide residential loan program making energy upgrades easy & affordable.



Charge your EV with your solar and abolish fuel cost, saving \$1,500-\$2,000 annually.



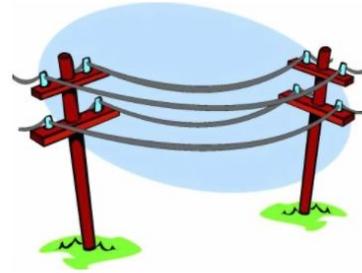
What is Net Metering?



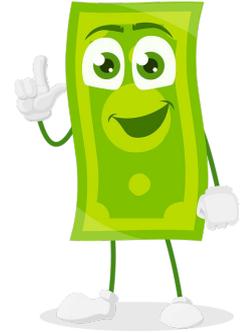
1. Solar panels transform sunshine into usable electricity.



2. Home uses the energy from the solar panels.



3. Excess energy that your home does not use from solar goes back on the grid. The utility sells your extra energy to another building.



4. Your utility credits you the excess energy on your bill the next month.

Net Metering on Your Bill

- Production AC: How much energy your solar panels produce monthly
- Grid Usage: How much energy your home consumes from the grid
- Utility Bill: Your bill with solar
- Net Credits: The surplus of solar you produced the previous month
- Solar Savings: How much money you save on your monthly bill

Year One with Solar

Month	Production (AC) †	Grid Usage	Utility Bill	Net Credits	Solar Savings †
January 2021	614.0 kWh	2,187.1 kWh	\$235.83	0.0 kWh	\$63.11
February 2021	676.9 kWh	2,031.8 kWh	\$219.59	0.0 kWh	\$69.50
March 2021	1,060.2 kWh	800.4 kWh	\$91.75	0.0 kWh	\$106.93
April 2021	1,118.6 kWh	0.0 kWh	\$11.00	206.5 kWh	\$86.57
May 2021	1,272.4 kWh	0.0 kWh	\$11.00	679.2 kWh	\$52.57
June 2021	1,336.1 kWh	0.0 kWh	\$11.00	950.9 kWh	\$30.41
July 2021	1,280.1 kWh	0.0 kWh	\$11.00	1,065.1 kWh	\$12.25
August 2021	1,166.1 kWh	0.0 kWh	\$11.00	945.5 kWh	\$12.86
September 2021	1,048.9 kWh	0.0 kWh	\$11.00	838.5 kWh	\$11.77
October 2021	857.5 kWh	0.0 kWh	\$11.00	360.0 kWh	\$42.37
November 2021	651.8 kWh	0.0 kWh	\$11.00	-880.2 kWh	\$152.65
December 2021	516.8 kWh	0.0 kWh	\$11.00	-1,776.1 kWh	\$233.77
Total	11,599.4 kWh	5,019.3 kWh	\$646.17	2,389.39 kWh	\$874.75

credit



Predictable Energy Bill from Solar

We offset 100% of our energy usage with solar panels. Our new monthly bill is \$5.95 for the lifetime of our system (~25 years).



YOUR MONTHLY ELECTRICITY USAGE



DAILY AVERAGES	Last Year	This Year
Temperature	38° F	46° F
Electricity kWh	6.3	0.0
Electricity Cost	\$0.81	\$0.19

MAILING ADDRESS	ACCOUNT NUMBER	DUE DATE
EMILY M RAYES [REDACTED] CARBONDALE CO 81623-1510	[REDACTED]	12/01/2020
	STATEMENT NUMBER	STATEMENT DATE
	708039930	11/09/2020
		AMOUNT DUE
		\$5.95

SERVICE ADDRESS: [REDACTED]
NEXT READ DATE: 12/11/20

ELECTRICITY SERVICE DETAILS

PREMISES NUMBER: [REDACTED]
INVOICE NUMBER: 0870454226

METER READING INFORMATION			
METER D1393454		Read Dates: 10/09/20 - 11/09/20 (31 Days)	
DESCRIPTION	CURRENT READING	PREVIOUS READING	USAGE
Total Energy	5989 Actual	5989 Actual	0 kWh

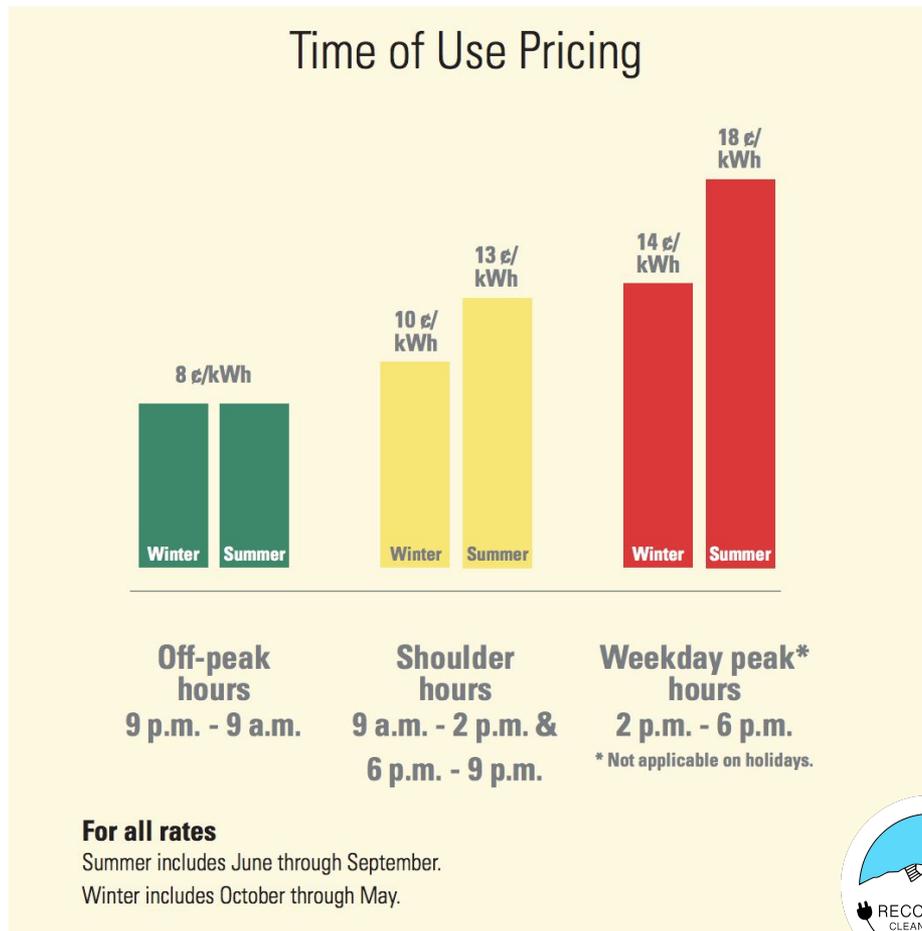
ELECTRICITY CHARGES			
RATE: R Residential General			
DESCRIPTION	USAGE UNITS	RATE	CHARGE
Service & Facility			\$5.47
Non-Summer	0 kWh	\$0.054610	\$0.00
Trans Cost Adj	0 kWh	\$0.000360	\$0.00
Elec Commodity Adj	0 kWh	\$0.030840	\$0.00
Demand Side Mgmt Cost	0 kWh	\$0.001890	\$0.00
Purch Cap Cost Adj	0 kWh	\$0.003920	\$0.00
CACJA	0 kWh	- \$0.000080	\$0.00
GRSA E	0 kWh	\$0.008760	\$0.00
Renew. Energy Std Adj			\$0.09
Colo Energy Plan Adj			\$0.02
Subtotal			\$5.58
Franchise Fee		3.00%	\$0.17
Sales Tax			\$0.20
Total			\$5.95
Premises Total			\$5.95



Time Of Use Rate Structure

Xcel's Time of Use pricing (coming soon)

- Residents with solar can offset expensive peak rates
- This rate structure increases the ROI of the homeowners solar PV
- TOU puts batteries to work, helping homeowners save even more



New Technology

- Batteries
 - Store surplus solar energy for future use
 - Increases resiliency for a utility grid preventing an outage
 - Backup power for homeowner
 - Improves ROI with Time of Use rate structure
- EV Charging Infrastructure



How Municipalities Can Help Transition

- Sustainable Building Code Adoption
 - Required solar for new buildings (based on sq. footage)
 - All buildings, parking lots are EV ready
- Reduced Permit Fees
- Public Education
- Provide homeowner incentives
- Create a culture of sustainability
- ???



Thank You

Kyle Lord
kyle@reconnect-ce.com



DRAFT minutes from the November 19, 2020 meeting of the CEC

Present: Myrna, Ines, Denise, Tom

Guest: Orrin Moon, Fire Protection Division Chief and Fire Marshall

Denise called the meeting to order at 6:35 p.m.

Discussion began with an overview of the Community Market event on September 17, 2020. Commissioners felt that it went well, though more could be done to encourage citizens to visit the table and learn more about fire prevention. Commissioners noted that few people came to the table, but those who did come to the table took information.

Commissioners discussed different strategies for how to educate residents about wildfire danger. Chief Moon agreed that the public could benefit from additional education, noting that New Castle was currently in exceptional drought and in a wildfire prone area. He mentioned that the town was fortunate that the small fire on October 27, 2019, happened when air support was available. Should a similar fire occur when resources were devoted to other wildfires, the town might not be so lucky. As was noted, "people don't think about wildfires until there is smoke in the area."

Discussion then turned to possible education strategies that included neighborhood fire mitigation meetings, where citizens could gather to learn about fire safety, using a few homes on the block as examples. This would have the advantage, commissioners thought, of gathering neighbors together to consider fire risks around their homes. Discussion then focused on telling stories of homes that burned as a way of alerting people to possible fire danger. Commissioner Myrna and Ed and Caroline Mooney, New Castle residents, have suffered such a loss. They agreed to work on this idea for the next meeting. Ines volunteered to talk to the homeowners' association to see the level of interest in working on wildfire education, home assessment and mitigation.

Chief Moon suggested that a grant might be available for funding mitigation and that funding might be available for a newspaper flyer or other hand-out.

All commissioners agreed that this was an educational/outreach effort that was needed, and that discussion should continue.

Denise and Myrna spoke briefly about sharing the Re-Energize program with local businesses. They left information at ten small New Castle businesses, but as of the meeting time, no business had contacted Garfield Clean Energy.

Denise then asked about commissioners' interest in learning more about residential solar and the divestment initiative underway in many municipalities, states, and organizations. Commissioners agreed that this would be of interest. Denise said that she would put this on the December agenda.

The meeting ended at 8:15, with a motion by Tom (second by Myrna).