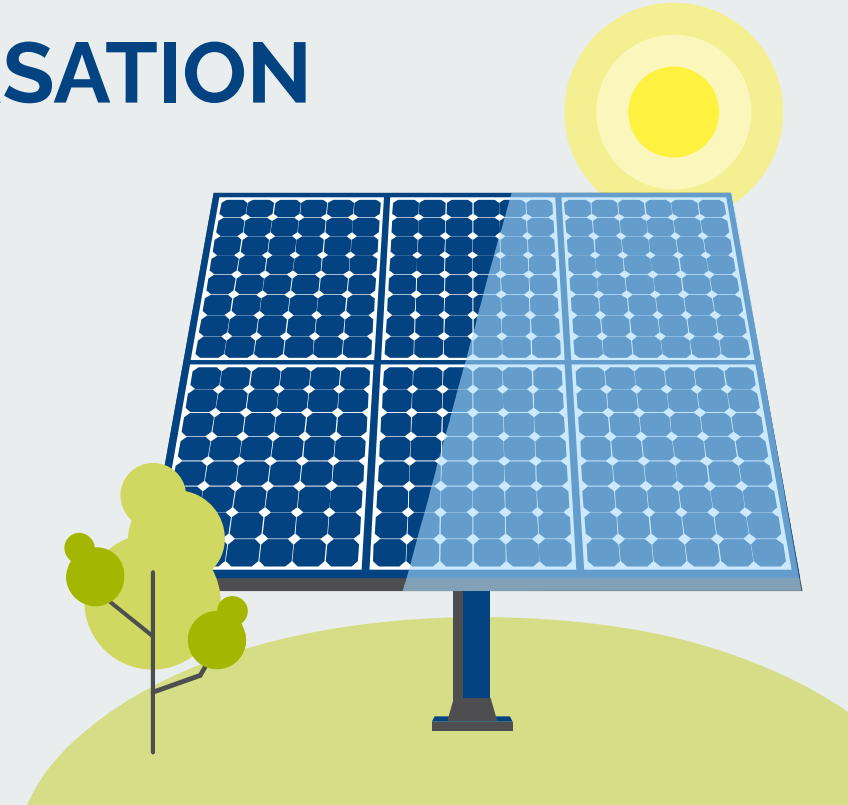
COMMUNITY CONVERSATION

ON LOCAL SOLAR ENERGY

Created by EcoAction Partners

EcoAction Partners



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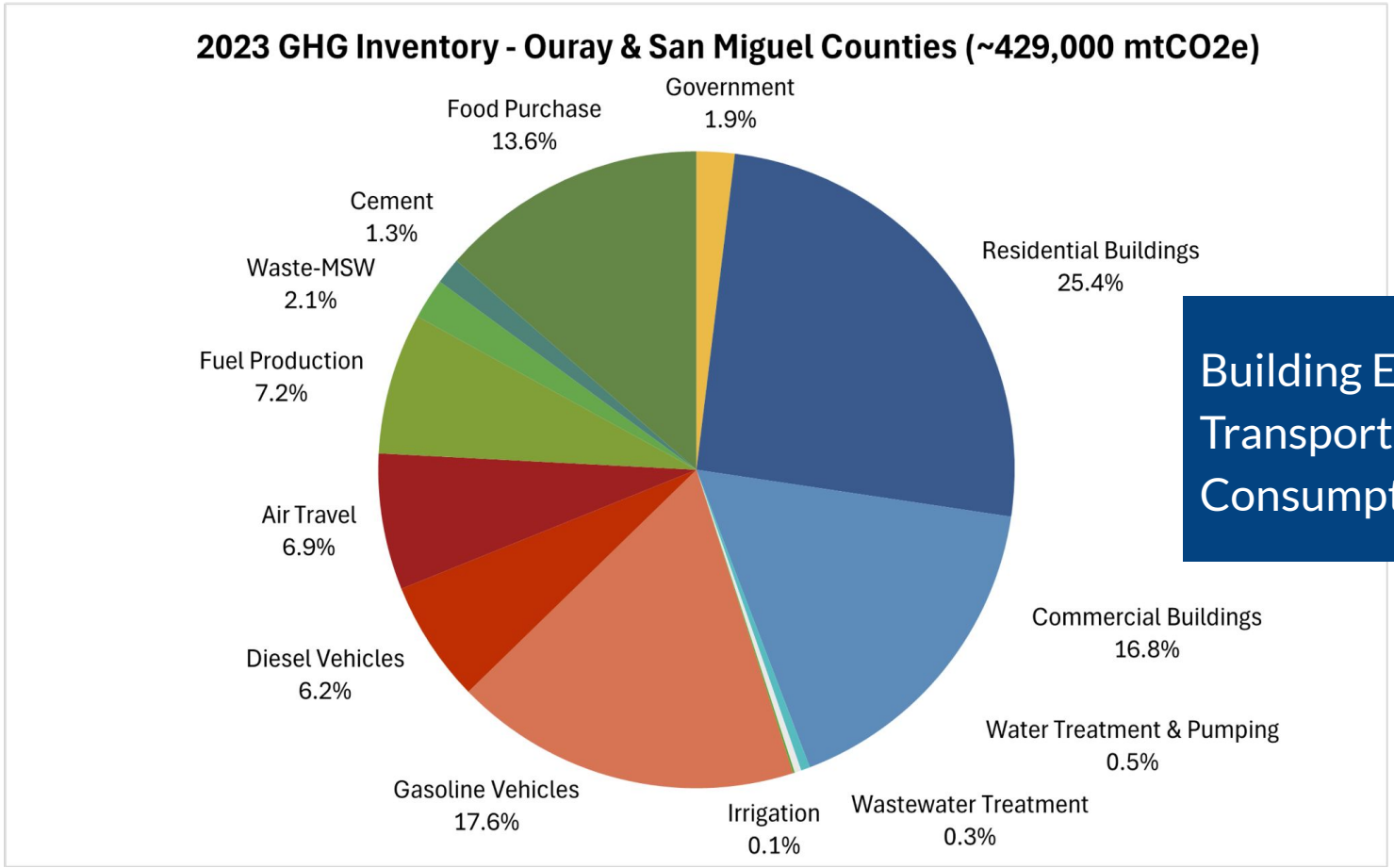
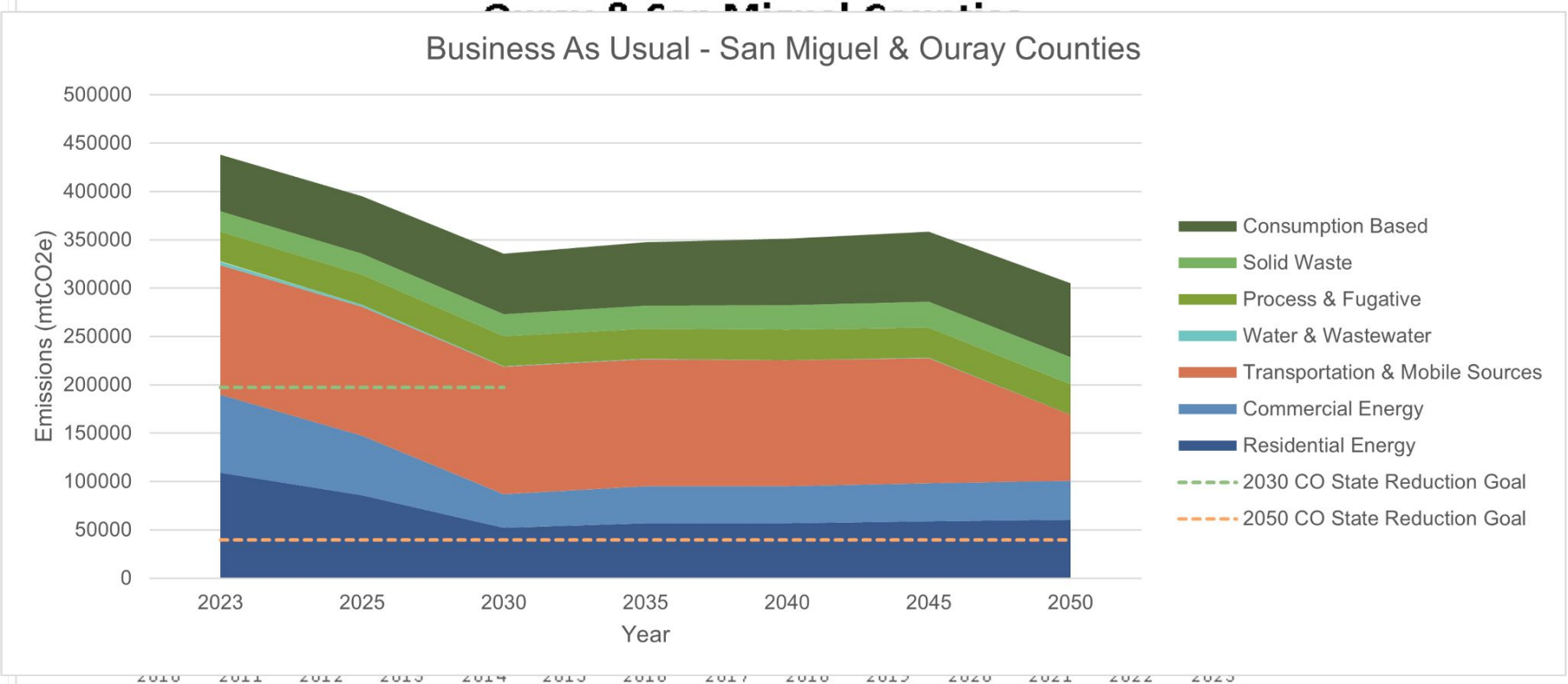
1 GHG Emissions and Climate Impact

2023 Greenhouse Gas Inventory

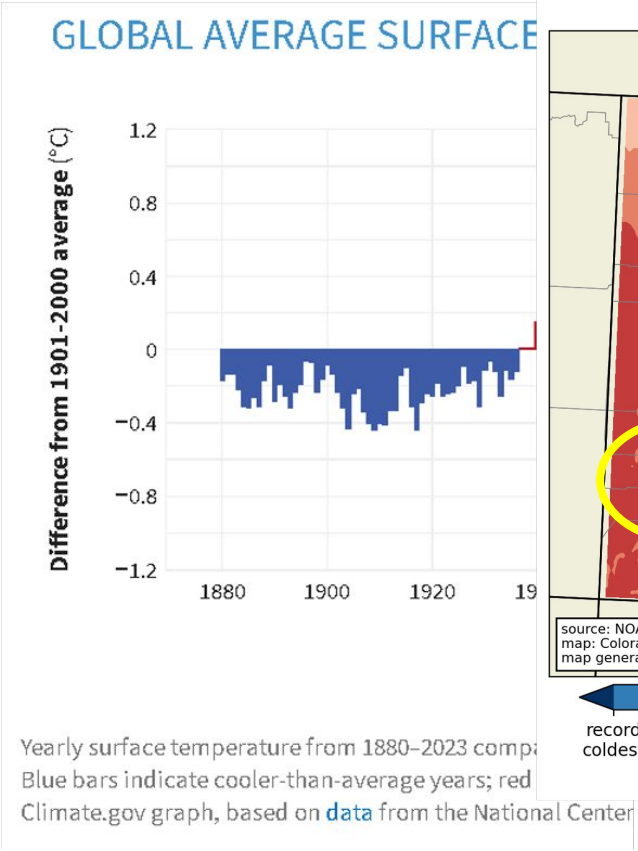


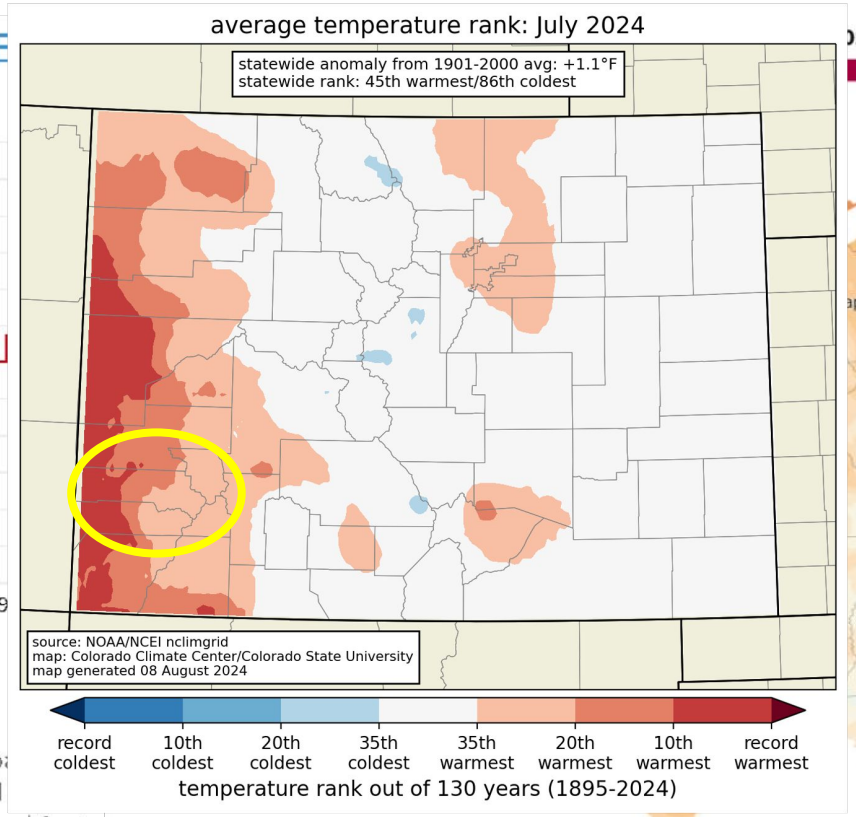
Building Energy Use: 43%
Transportation: 31%
Consumption-Based: 24%

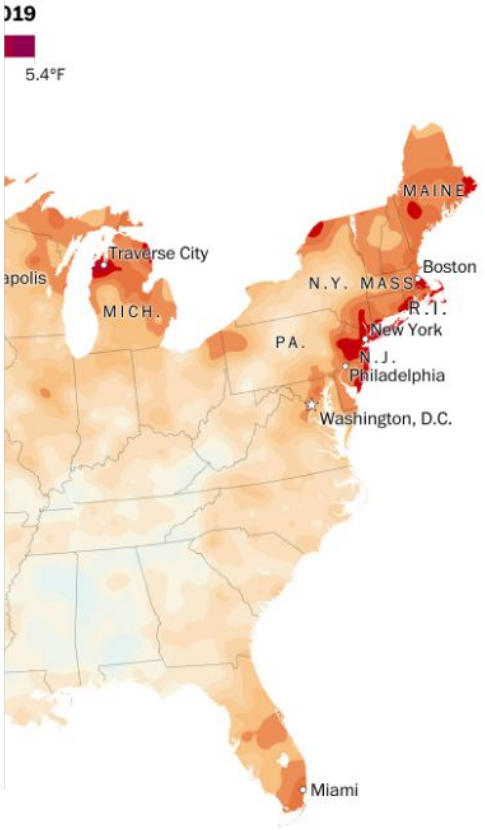
Growth over the Years



Why our efforts to reduce emissions matter







Natural Disasters & Extreme Events

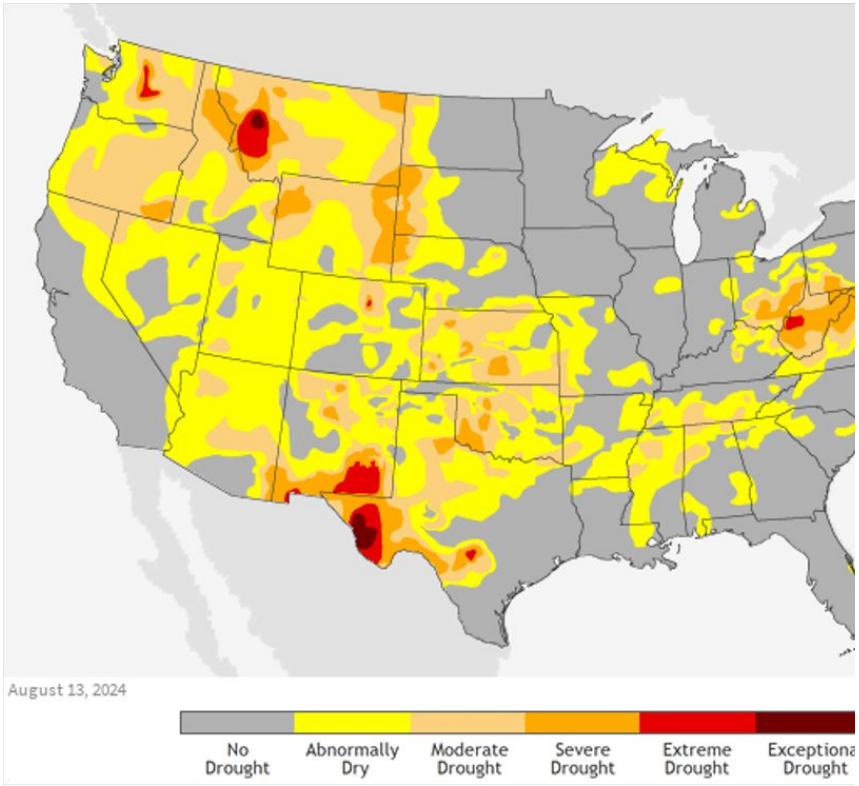
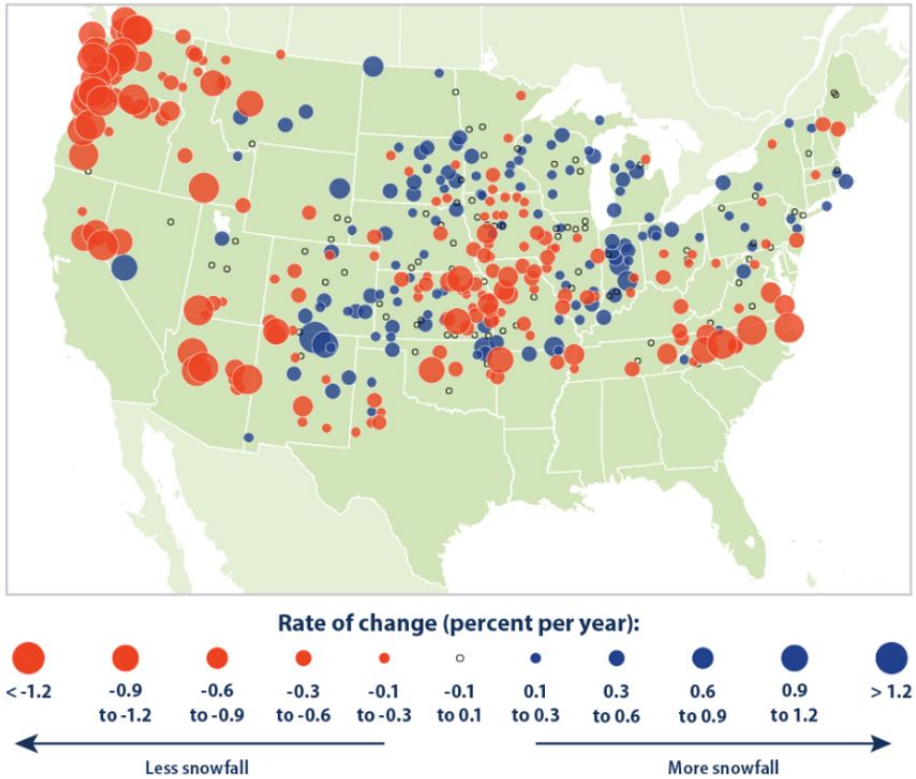


Figure 1. Change in Total Snowfall in the Contiguous 48 States, 1930–2007



"Since 2000, an annual average of 70,025 wildfires have burned an annual average of 7.0 million acres, more than double the average burned in the 1990s." –Western Fire Chiefs Association

2 Potential of Local Solar Energy

POTENTIAL OF LOCAL SOLAR PV ELECTRICITY PRODUCTION

A. Meets Regional Goals

Climate Action Plan Goals

- Reduce greenhouse gas emissions
- Produce local renewable energy
- Preserve natural resources: air quality, water, environmental viewshed, soil quality for ranching and farming

Building Local Electric Grid Resiliency

POTENTIAL OF LOCAL SOLAR PV ELECTRICITY PRODUCTION

B. Solar as a Local Energy Resource

Local Considerations

- Sunshine 300 days per year
- Solar intensity is high due to elevation, dry environment and clean air

Environmental Benefits

- Emissions reductions
- Water savings

Economic Benefits

- Added economic output
- Job growth and wage opportunities: construction, installation, maintenance
- Local/State construction taxes
- Avoided transmission costs
- Avoided power interruption costs.

POTENTIAL OF LOCAL SOLAR PV ELECTRICITY PRODUCTION

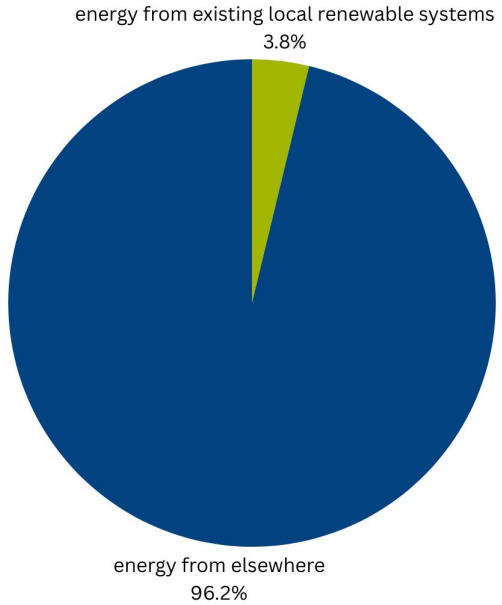
C. Meeting San Miguel County's Electricity Needs

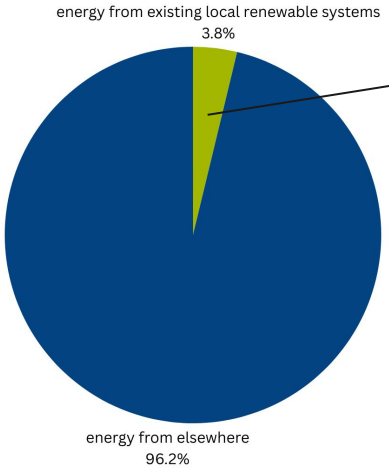
SMC's total annual energy use

130,000,000 kWh

OR

60–80 MW




energy from existing local renewable systems
3.8%
energy from elsewhere
96.2%

Pandora Hydro
11.8%
LD solar
8.3%
IQ solar
6.4%
Behind the meter rooftop solar
73.5%

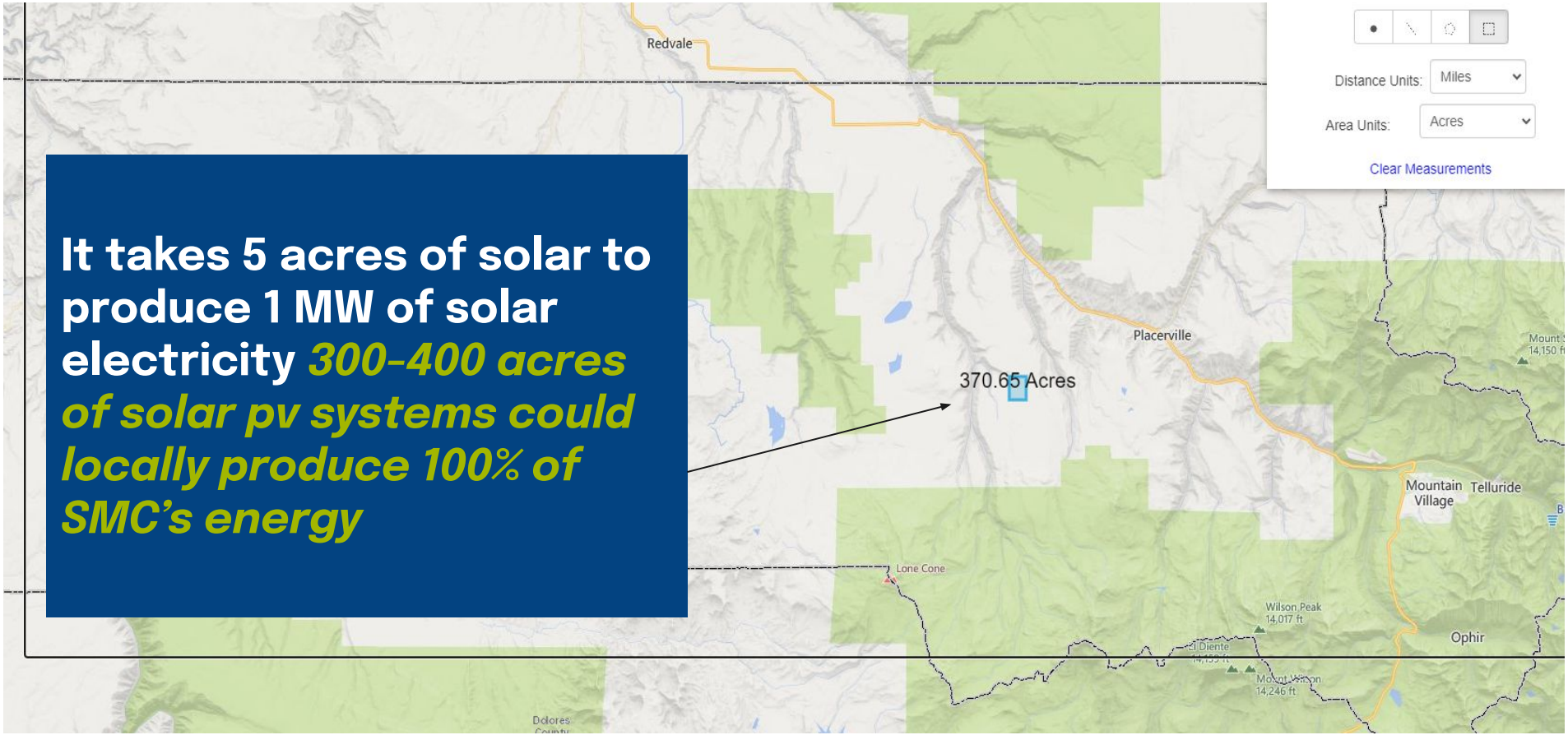
(Photo courtesy of Erdmin Energy Enterprise)

IQ SOLAR

- Sited over a retired landfill
- 1.5 acres
- 197 kW
- Dedicated to serve low-income households with bill credits
- $58,000 in bill credits

LAST DOLLAR SOLAR

- 250 kW
- 2 acres



It takes 5 acres of solar to produce 1 MW of solar electricity *300-400 acres of solar pv systems could locally produce 100% of SMC's energy*

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3 Addressing Concerns

COMMON CONCERNS ABOUT SOLAR PV SYSTEMS

A. Environmental Impacts

Water

The 3 largest solar PV arrays in SMPA territory are in SMC: No water has ever been used to wash these panels.

Fire

Solar systems do not create nor increase fire hazard.

Wildlife

Wildlife impacts can be mitigated or avoided with proper siting and site planning.

Soil

Shading from panels reduces soil temperature. Rainwater / irrigation management ensures sufficient water supply.

COMMON CONCERNS ABOUT SOLAR PV SYSTEMS

B. Public Health & Safety

"There are no negative impacts to the health or safety of a community due to solar development"

Toxicity

Solar panels are not toxic and do not contain liquid.

Groundwater

Solar panels will not impact groundwater

EMF

Solar arrays do not create harmful levels of EMF.

Noise

Solar inverter noise is less than that of normal conversation. Mitigation with sound insulated enclosure, plants / shrubbery.

COMMON CONCERNS ABOUT SOLAR PV SYSTEMS

C. Visual Impacts

Solar systems can be located on flat ground or variable terrain and still maximize solar energy.

Panels with tracking mounts can tilt to follow the sun, and solar systems can be designed to follow undulating terrain.

Visibility reduction through mitigation methods.

POTENTIAL AND POSSIBILITIES

D. Dark Sky, Advanced Technology & Agrivoltaics

Solar development has no impact on nighttime light. SMPA's current community arrays do not have any lights or security lighting. Thus, similar systems in SMC will not impact DarkSky International status or applications.

Last Dollar Solar Array

POTENTIAL AND POSSIBILITIES

D. Agrivoltaics

Opportunity: Dual use of land for solar and agricultural production

Site specific design for maximum solar and ag benefits

- Provides partial shading: beneficial for some crops
- Water runoff control for irrigation / stormwater management
- Shade for cattle, sheep, or chickens that also control area vegetation
- Herbal medicinal crops

Indian Ridge Farm in Norwood

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Landscape & Visual Impact Assessment Guidelines:
https://www.mdpi.com/2073-445X/11/7/1006

DarkSky International Organization:
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Agrivoltaics:
https://www.nrel.gov/solar/market-research-analysis/agrivoltaics.html

https://openei.org/wiki/

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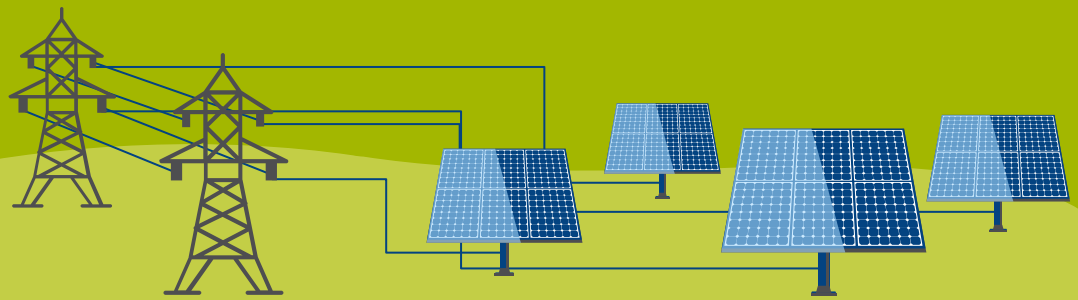
4 Policies: SMC Land Use Codes & SMPA Time-of-Use Rates & Net-metering



A. SMC Land Use Code Update

- San Miguel County is in the process of updating the Land Use Code to include regulations regarding solar energy, renewables and major utilities.
- The draft regulations for Solar Energy Systems are scheduled for consideration and adoption at the September 18, 2024 BOCC hearing.
- San Miguel County currently has a moratorium on all solar and major utility projects.
- Codes apply to projects across the entire county.

B. SMPA Time-of-Use Rates & Net-metering

- SMPA is considering TOU rates to address on/off peak Tri-State rate differences.
- Rate changes impact how net-metered system energy use is credited.

Solar Regulations - Current Draft - Topline

Scale	Size	Details	Permitted Zone Districts	Approval
Small	Max 250 kW or <=½ acre	Roof or ground-mounted	• All zone districts • Not subject to moratorium	Administrative (staff) approval
Medium	½ - 30 acres	Target is up to 5 MW so commercial developers will be interested	• Forestry/Ag/Open Space • Heavy Commercial • Low Intensity Industrial • Public • Wrights Mesa Light Industrial • Wrights Rural Agricultural • West End	2-step approval (CPC + BOCC)
Microgrids		Can connect to and/or operate independently of larger grid To provide power to neighborhoods, including backup during outages	• High/Med/Low Density • Affordable Housing PUD • Low Density Residential • Mixed Use Development • Community Housing	
Large	30+ acres		• Forestry/Ag/Open Space • Heavy Commercial • Low Intensity Industrial • Public • West End	

Solar Regulations - Current Draft - Topline (cont.)

- System acreage includes everything within fenceline (e.g., panels, transmission/distribution components, batteries, roads)
- Lot line setbacks of 50’ for medium, 200’ for large-scale
- Encourage use of previously disturbed lands
- Max farmland that can be covered is 30% of site, or 50% if agrivoltaics are employed
- Utility interconnect agreement or letter of intent is required
- Visual impacts for large-scale evaluated at distance of 1 mile, or as requested by county

Solar Regulations - Current Draft - Topline (cont.)

- **Impact/mitigation plans required**
  - Water quality
  - Floodplains, wetlands, riparian areas, fens
  - Stormwater
  - Wildlife and wildlife habitat
  - Terrestrial plants
  - Grading, erosion, sediment control
  - Revegetation and weed management
  - Noise, dust, fumes, vibrations, odor
  - Glare, glint, lighting (must comply with Dark Sky regs)
  - Visual impacts (within 1 mile for large scale)
  - Natural hazards
  - Local government services/infrastructure
  - Housing
  - Water services
  - Agricultural resources and heritage
  - Recreational resources
  - Paleontological, historical, and archeological resources
- **Additional plans required**
  - Traffic, roads and rights-of-way
  - Emergency preparedness and response
  - Hazardous materials management
  - Facility maintenance
  - Decommissioning and restoration (including performance bond required for life of project)

Acknowledgements

Thank you!

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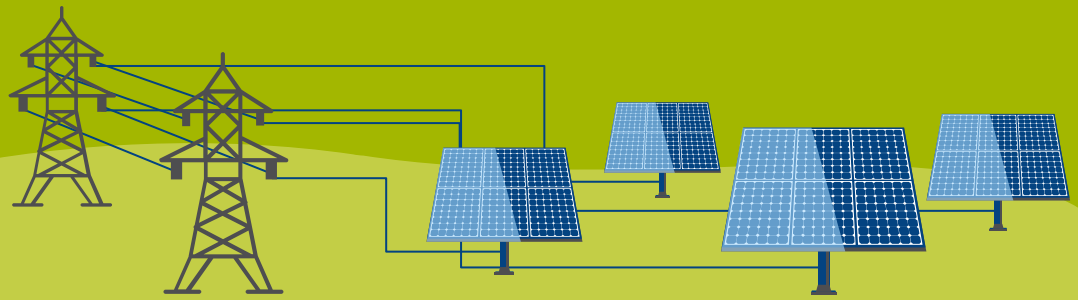
5 Discussion



A. Discussion: Rules for Engagement

1. Creating a safe container
    - Respect differing opinions
    - Speak from your own experience, use “I” statements
    - Enter discussion with an open mind
2. Write your topic/ questions/concern on a piece of paper.
3. We will draw questions at random (you can remain anonymous or speak to your question)
4. Raise your hand if you have an answer or response to the question being proposed. Each person gets 3-5 minutes to speak in order to keep the conversation flowing and create space for multiple voices to be heard.
5. We will have ~15 minutes per topic area

B. Discussion Questions

- How do you envision local renewable energy making a positive impact in our region? What concerns do you have?
- What does it look like to balance your concerns with production of local renewable energy?
- What do you think about the application requirements for local solar projects?
- What would you like to see as a community scale solar project in SMC?
- What creative solutions do you imagine could be developed in addition to solar to meet local renewable energy production goals?
- What are some ways to engage with the public process to voice your opinion on local renewable energy production?

Continued Public Engagement

- Review draft regulations on the county's website - bit.ly/SolarDraftRegs
- Submit written comments for staff and board review - planning@sanmiguelcountyco.gov
- Attend BOCC meeting in Norwood on Sept 18