

Los Alamos Resiliency, Energy and Sustainability (LARES) Task Force

**Final Report Presentation
February 22, 2022**

LARES Task Force Members

- Katie Leonard, Chair
- Robert Gibson, Vice-Chair
- Sue Barns
- Elizabeth Daly
- Chick Keller
- Roy Michelotti
- Heidi Rogers
- Oral Saulters
- Steve Tobin

LARES Task Force Subcommittee Members

- Lia Brodnax
- Skip Dunn
- Ben Hill
- Jack Kennison
- Daniel Leonard
- Dena Pesenson
- Rick Wallace
- Greg White

LARES Task Force: LA County Staff

- Randall Ryti, County Council Liaison
- Angelica Gurule, Environmental Services Manager
- Steve Lynne, County Manager
- Anne Laurent, Deputy County Manager
- Linda Matteson, Deputy County Manager
- Juan Rael, Public Works Director
- Jon Bulthuis, Public Works Deputy Director
- Philo Shelton, Department of Public Utilities Manager
- Steve Cummins, Deputy Utility Manager, Power Production
- Jordan Garcia, Department of Public Utilities, Power System Supervisor
- Ben Olrich, Department of Public Utilities, Engineering Associate
- Sobia Sayeda, Senior Planner
- David Martinez, Building Safety Manager
- Amy Danforth, Senior Office Specialist
- Many Information Management Staff (AV Support)
- LA County Boards
- Other LAC Staff

LARES Task Force

- Citizen petition brought to County Council December 2020
- Charter granted, LARES formed January 2021
 - “The Task Force will build a comprehensive resiliency, energy, and sustainability ‘white paper’ or strategic plan. This plan will present specific, measurable, achievable, and timely recommendations for how Los Alamos can achieve or exceed the goals set forward by our governor in the New Mexico Climate Change Executive Order 2019 which complies with the 2015 Paris Agreement.”
- Chartered for 390 days, officially “sunset” February 20, 2022

LARES Task Force

- Recommendation to join Coalition of Sustainable Communities NM
 - Support and source of information
 - Seeing what else is being done in NM
 - Making contacts/connections
 - Council Chair Ryti attended COP26
 - Local & regional → national → international work being done
- Interim Report submitted August 2021
- Final Report submitted February 1, 2022



Robert Gibson



Angelica Gurule



Randall Rytli



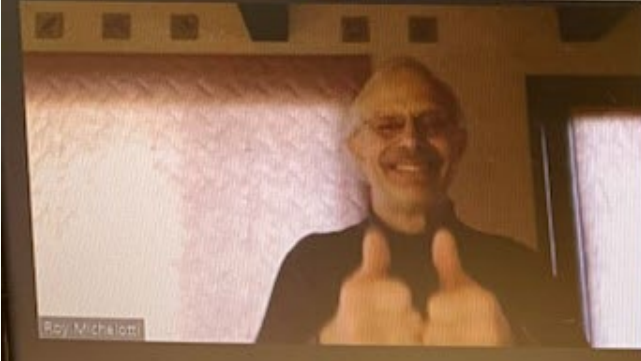
Katie Leonard



Heidi Rogers (she/her/hers)



Charles Keller



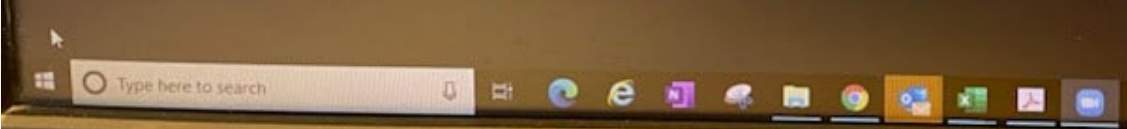
Roy Michaloni



Elizabeth daly



Skip Dunn

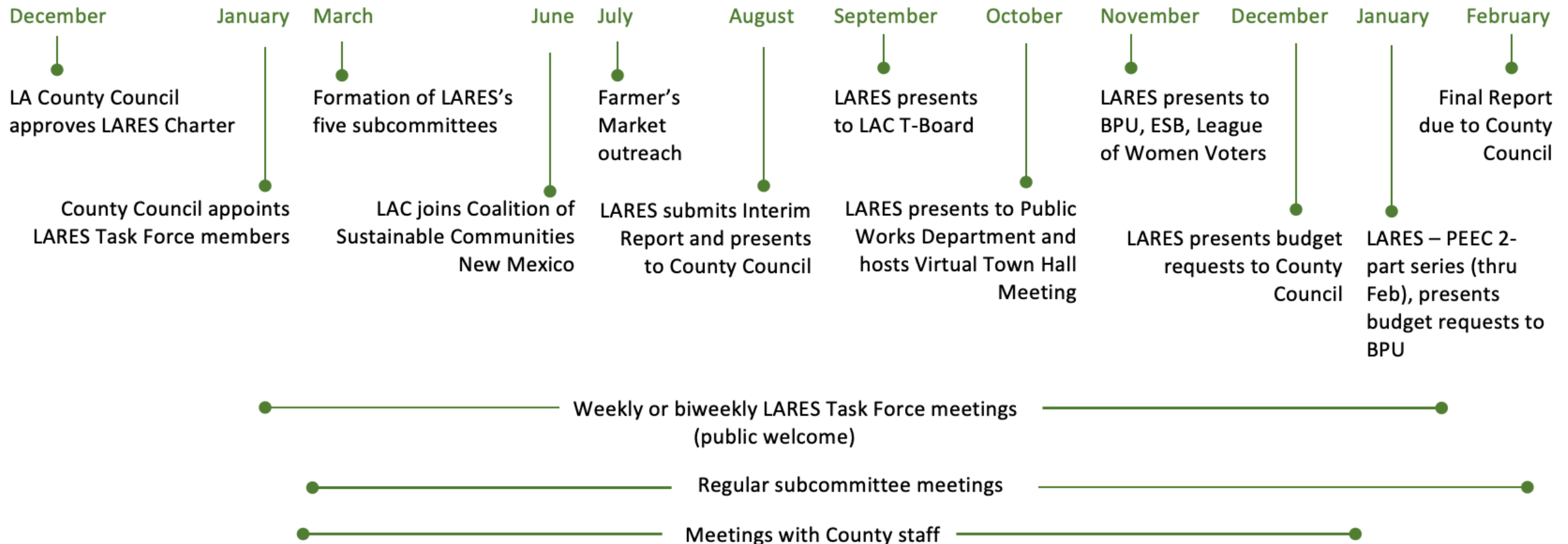


Community Outreach

2020

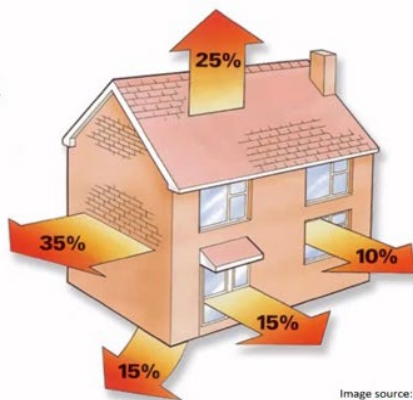
2021

2022



Homes lose heat through all exposed side

Distribution of heat loss from typical American single-family detached home.



Only a third of loss is through walls. Windows, doors, roofs, & crawl spaces (if any) are major heat pathways, too.

Image source: www.mygreenhomeblog.com/four-key-areas-home-must-maintain

Not shown are heat leaks via air infiltrating through cracks, failed caulk, etc.



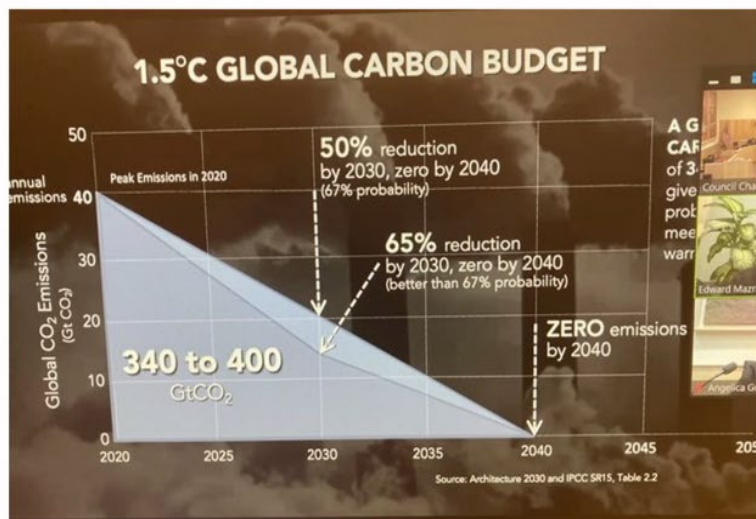
Some Suggested Actions

- **Cut food waste** – Buy only the food you know you'll eat, store it properly
- **Eat more veggies** – Replace some of your meat with healthy plant-based proteins
- **Insulate your home** – Improve your home's window and wall insulation
- **Refuse & Reuse** – avoid buying new; reuse, rent, repair, resale, share
- **Heat & cool smarter** – Install heat pumps or smart thermostats
- **Get solar** – Invest in solar panels and solar hot water
- **Drive electric or hybrid** – Make your next car an electric or hybrid vehicle
- **Get around greener** – Carpool or travel by bike, bus, or foot
- **Fly less** – Stay local, make a video call, or find another way to travel
- **Reduce & recycle** – Avoid single-use plastic and recycle right



LARES in the community

Climate Change: Chick Keller



Attachment B



Final Report

- General Recommendations
- Natural Gas Reduction
- Electricity
- Transportation & Mobility
- Waste, Consumption & Natural Resources
- Community Planning

Time Frames

- Immediate (3 months to 1 year)
- Short-term (1-2 years)
- Medium-term (3-5 years)
- Long-term (6-10+ years)
- Ongoing (start and continue)
 - Multiple dots

General Recommendations (GR)	Immediate	Short-Term	Med-Term	Long-Term	Ongoing
GR-1: Establish net-zero greenhouse gas emissions as a long-term goal for Los Alamos, both the community (exclusive of LANL) and its government.	●				
GR-2: Perform a comprehensive baseline greenhouse gas emissions study from which to set reduction targets (and other goals) and against which to measure progress.	●	●			●
GR-3: Create and adopt a strategic climate action plan for Los Alamos County which includes baseline data, greenhouse gas reduction targets, and climate mitigation strategies, to be utilized and updated regularly.	●	●			●

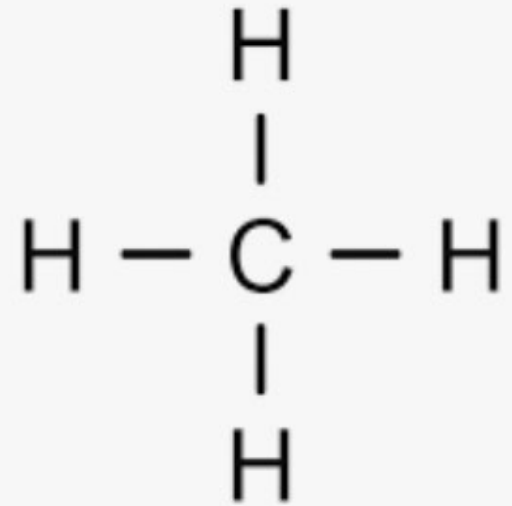
General Recommendations (GR)	Immediate	Short-Term	Med-Term	Long-Term	Ongoing
GR-4: Create and fund a senior staff position (e.g., “sustainability coordinator”) to lead and coordinate the work of all County departments, including the Department of Public Utilities, to meet the County’s net-zero and other resiliency and sustainability goals.	●				
GR-5: Provide recurring funding to invest in and integrate the goal of net-zero greenhouse gas emissions and other sustainability practices into all County government operations, including modeling new green technologies for residents.	●	●			●

General Recommendations (GR)	Immediate	Short-Term	Med-Term	Long-Term	Ongoing
GR-6: Create an on-going body of (largely citizen) collaborative stakeholders to advise Council, Department and Board of Public Utilities, and other relevant County bodies on implementing the goals and strategies recommended in the climate action plan and monitor progress.	●	●			●
GR-7: Form a partnership with LANL and the Los Alamos Public Schools with the specific intention of collaboration on greenhouse gas reduction.	●				●

General Recommendations (GR)	Immediate	Short-Term	Med-Term	Long-Term	Ongoing
GR-8: Invest in consistent, ongoing community outreach and education promoting the reduction of our individual and collective greenhouse gas emissions, including an “Educational Specialist” position.	●	●			●
GR-9: Produce an annual climate action report to be presented to County Council and shared with the community.			●		●

Natural Gas Reduction

- Reducing CO₂ and CH₄ (methane)



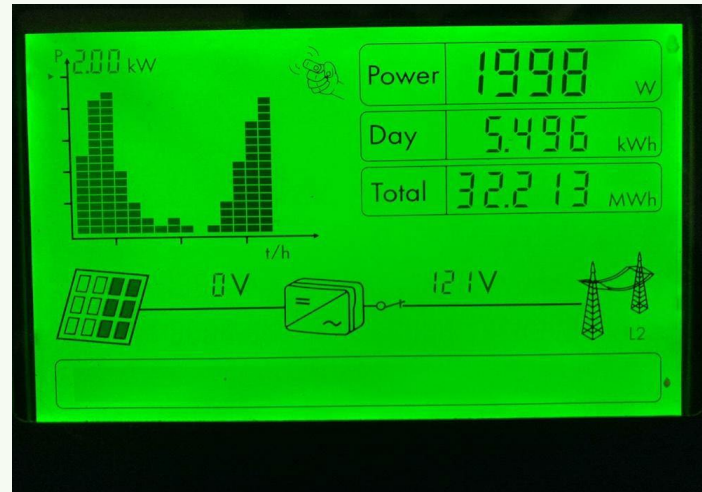
Recommendations: Natural Gas Reduction (NG)	Immediate	Short-Term	Med-Term	Long-Term	Ongoing
NG-1: Set a community goal to reduce natural gas use by at least 2% per year.	●				
NG-2: Encourage compact architectures in new construction.		●			●
NG-3: Require new construction to have solar access, if feasible.		●			●
NG-4: Require new construction to derive a significant portion of its heating energy from the sun.			●		●

Recommendations: Natural Gas Reduction (NG)	Immediate	Short-Term	Med-Term	Long-Term	Ongoing
NG-5: Adopt the 2021 International Energy Conservation Codes (IECC) as the standard for new construction and guidelines for remodeling, and continue to adopt new IECCs as they are issued.	●				●
NG-6: Set a cut-off date for new natural gas hook-ups and new electric resistance heating installations, effectively requiring electric heat pumps. Encourage substitution of heat pumps when gas-fired furnaces and boilers are replaced.		●	●		●
NG-7: Encourage substitution of solar thermal, heat pump, tankless, or point-of-use water heaters when traditional hot water heaters are replaced.					●

Recommendations: Natural Gas Reduction (NG)	Immediate	Short-Term	Med-Term	Long-Term	Ongoing
NG-8: Encourage substitution of electric induction ranges when traditional electric or natural gas ranges are replaced.					●
NG-9: Discourage or prohibit pilot lights in new or replacement gas appliances.		●			●
NG-10: Include heating demand in electrical utility generation, transmission, and distribution supply planning.		●			●
NG-11: Make energy audits and other relevant information available to property owners through County government.	●				●

Electricity

- Natural gas reduction will mean increasing electricity consumption
- Supply & Demand



Recommendations: Electricity (E)	Immediate	Short-Term	Med-Term	Long-Term	Ongoing
E-1: Formalize the BPU/DPU and Los Alamos County Council goal to be a net-zero carbon electricity supplier by 2035.	●				
E-2: Develop a strategy that achieves LAC's net-zero carbon goals regardless of the nature of any future LAC/LANL power generation relationship.	●				
E-3: Develop an "Intermittency Management Strategy" including but not limited to demand management, curtailment of generation, and time-of-use metering.		●			
E-4: Implement the recommendations of the 2017 Integrated Resource Plan (IRP) and expected IRP recommendations in 2022.	●	●			●

Recommendations: Electricity (E)	Immediate	Short-Term	Med-Term	Long-Term	Ongoing
E-5: Investigate periodically the feasibility of restricting market purchases of electricity to carbon-free sources.			●		
E-6: Continue to pursue the feasibility of small modular reactor technologies.	●				●
E-7: Study distributed (“rooftop”) electric generation and storage as potentially an integral part of LA’s power supply.		●	●		
E-8: Initiate a pilot program to support the addition of residential storage batteries to homes with and without rooftop solar.	●				●

Transportation & Mobility

- Electric vehicles
- Commuting
- Spread out community
- LANL/LAPS/LAC partnership



Attachment B



Recommendations: Transportation & Mobility (TM)	Immediate	Short-Term	Med-Term	Long-Term	Ongoing
TM-1: Increase and incentivize public transportation ridership.		●			●
TM-2: Improve bicycle and walking infrastructure to promote safe and convenient carbon-free transportation.		●	●		
TM-3: Increase publicly accessible electric vehicle charging infrastructure.			●		●
TM-4: Increase the number of electric vehicles in the County fleet by at least two per year, eventually making 100% of light duty (passenger cars and trucks) plug-in electric.	●				●

Recommendations: Transportation & Mobility (TM)	Immediate	Short-Term	Med-Term	Long-Term	Ongoing
TM-5: Revise and implement a County-wide “no idling” policy with shaded parking options.			●		
TM-6: Launch a municipal bike share program.			●		
TM-7: Encourage private electric vehicle purchase and charging during non-peak hours.		●			●
TM-8: Increase the number of solar-powered flashing light crosswalks.		●			●
TM-9: Convert municipal small engines, lawn/garden equipment, and golf carts, to be fossil fuel free within ten years.		●			●

Waste, Consumption & Natural Resources

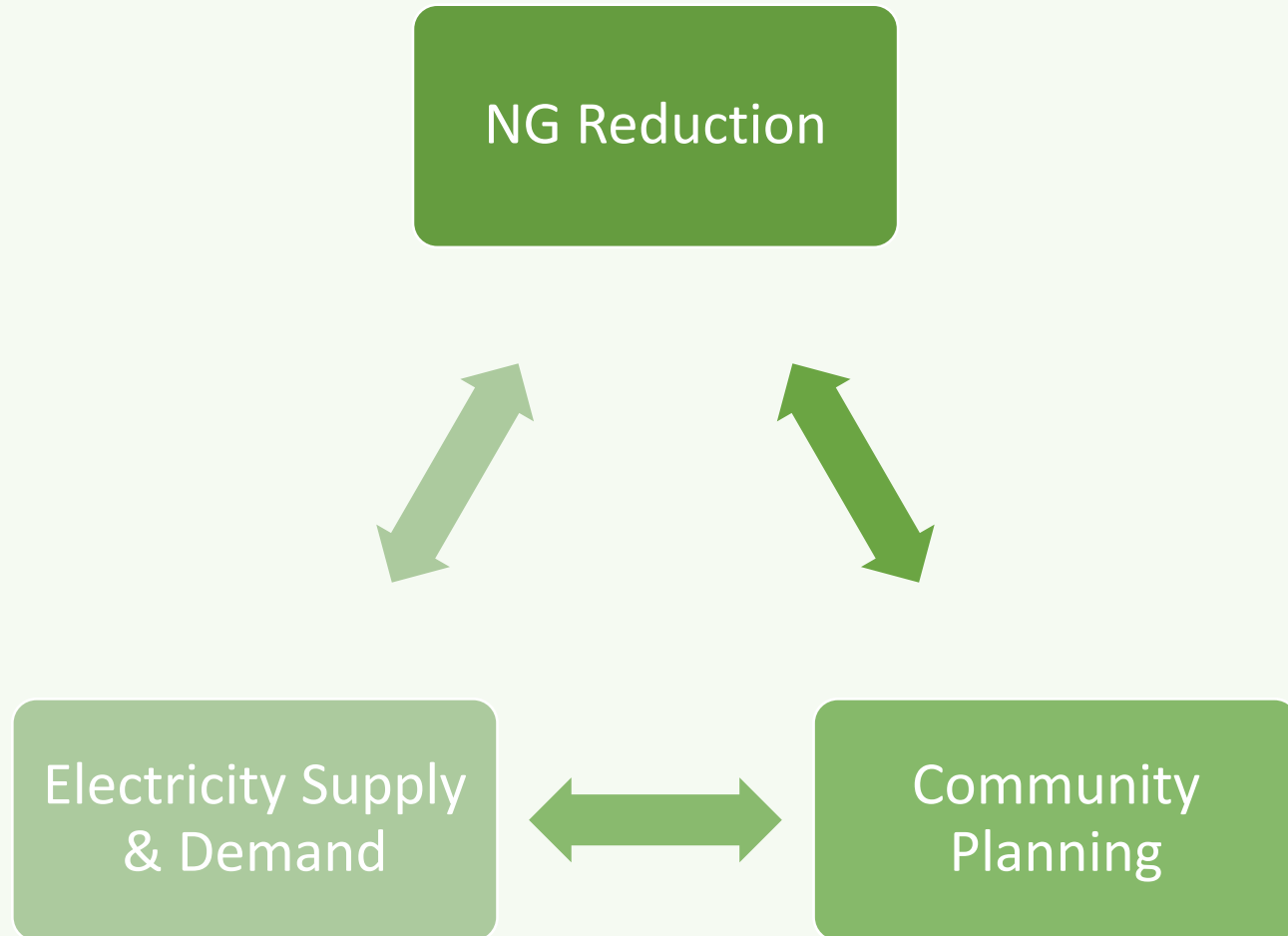
- Reducing consumption & waste
- Managing natural resources



Recommendations: Waste, Consumption & Natural Resources (WCNR)	Immediate	Short-Term	Med-Term	Long-Term	Ongoing
WCNR-1: Set a goal to eliminate municipal solid waste through reduction, reuse, recycling and composting (by e.g., 2035) following “Zero Waste” principles.	●			●	
WCNR-2: Reduce consumption-associated greenhouse gas emissions through sustainable purchasing and consumption/disposal of food, goods, and services.	●			●	

Recommendations: Waste, Consumption & Natural Resources (WCNR)	Immediate	Short-Term	Med-Term	Long-Term	Ongoing
WCNR-3: Develop and adopt a comprehensive water conservation and watershed stewardship plan to maintain and enhance the quality and quantity of LAC's water supply.	●				●
WCNR-4: Develop and implement a plan to capture stormwater runoff and reduce contamination through green infrastructure approaches.	●				●
WCNR-5: Manage natural and community landscapes for climate mitigation, resiliency, community, cultural and wildlife values, and carbon sequestration.	●				●

Community Planning



Recommendations: Community Planning (CP)	Immediate	Short-Term	Med-Term	Long-Term	Ongoing
CP-1: Adopt a local overlay code that incorporates additional locally-specific greenhouse gas reduction provisions.		●	●		
CP-2: Advocate for change or clarification of the NM Anti-Donation Clause to allow local governments to provide incentives for energy-reduction projects.			●		
CP-3: Educate property owners on potential energy-saving renovations to their buildings.		●			●
CP-4: Strengthen the County's environmental purchasing policy.		●	●		
CP-5: Add commercial zoning within each area of town, such as each mesa and within White Rock.			●		

LARES Budget Request Items for FY23

Funding for a 1.0 FTE Sustainability Coordinator (GR-4)	\$100,000 - \$140,000 (annual/recurring)
Funding for a comprehensive, consumption-based greenhouse gas emissions study (GR-2)	\$25,000 - \$100,000 (one-time, this may include a CAP)
Funding for a Climate Action Plan (CAP) (GR-3)	\$100,000 initial plan development
Funding for 1.0 - 2.0 FTE Natural Gas staff (NG-11)	\$100,000 - \$250,000 (annual/recurring)
Funding for 1.0 FTE Education Coordinator (GR-8)	\$100,000 - \$125,000 (annual/recurring)
Funding for community outreach & education (GR-8)	\$40,000 (annual/recurring)
Funding for 2 electricity studies: -Preferred resource plan S9 (1 year) (E-5, E-7) -Market purchase of electricity feasibility study (6 months) (E-5, E-7)	\$75,000 (one-time) \$75,000 (one-time)
Funding to support sustainability programs and practices County-wide (GR-5)	TBD
Total Requested	\$615,000 - 905,000 (not counting GR-5)

Fiscal Considerations

- Low-carbon investments in our future
- Save money in the long-run

Moving Forward

- Potential initial County actions:
 - Formalize net-zero goals for LAC (GR-1, E-1)
 - Perform baseline emissions study (GR-2)
 - Create climate action plan (GR-3)
 - Hire appropriate staff (GR-4, NG-11)
 - Provide recurring funding (GR-5)
 - Continue “LARES” in some form (GR-6)
 - Partner with LANL & LAPS (GR-7)
 - Set annual natural gas reduction goals (NG-1)

Thank You!

- County Council
- Council Chair Ryti
- Angelica Gurule
- Philo Shelton
- Anne Laurent
- Task Force & Subcommittee Members
- LAC Staff
- Public



Image from NASA, public domain

Questions?