Goal Setting & Clarification
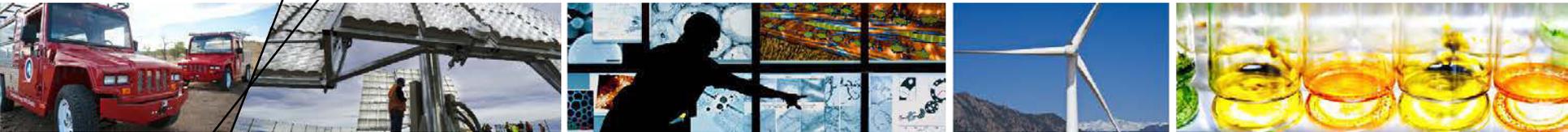
City and County Solar PV Training Program
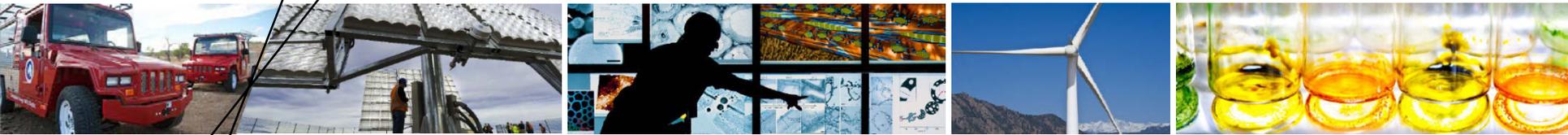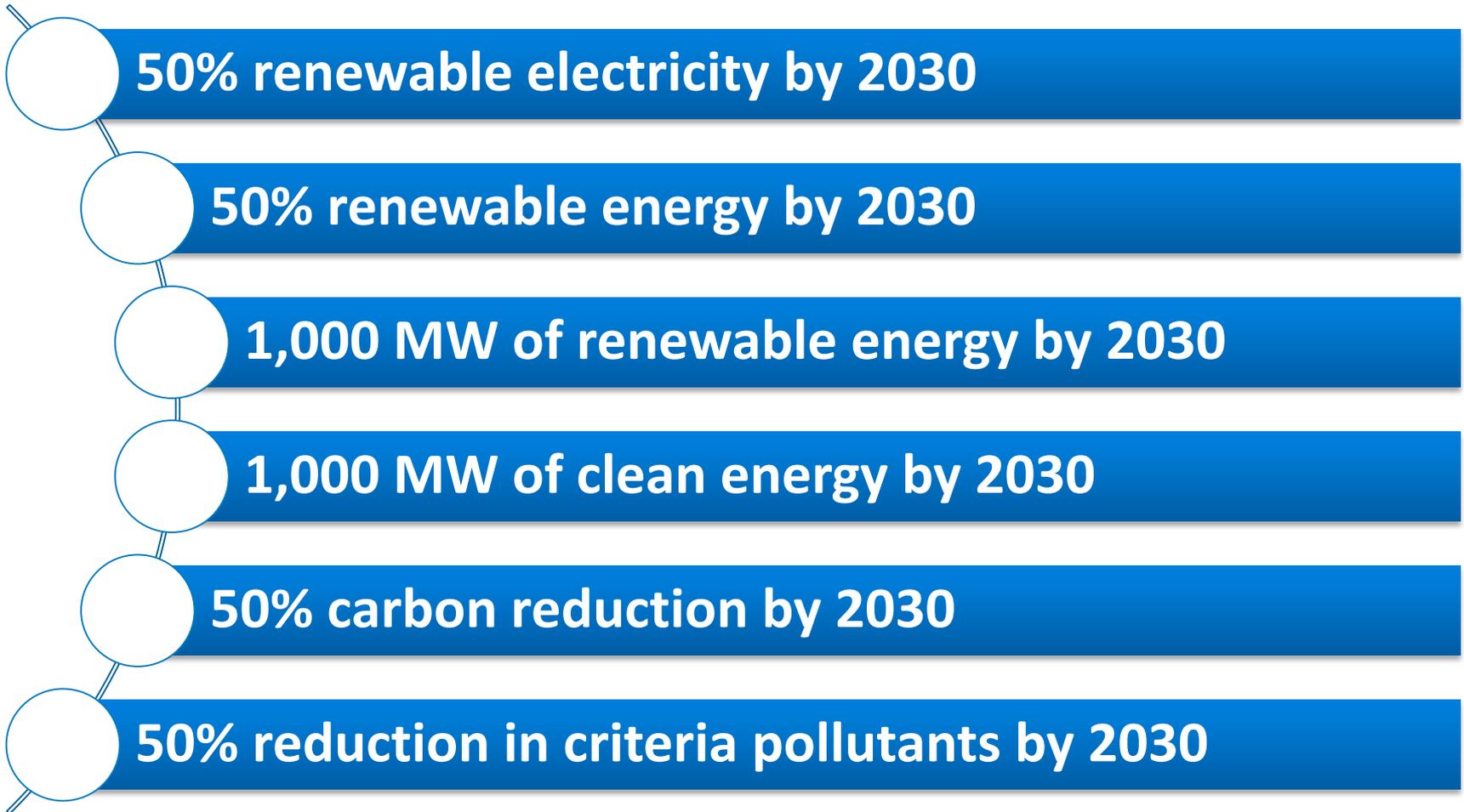
Module 1

Presenter: Joyce McLaren

Learning Objectives

- Understand nuances between different types of goals

- Understand the importance of terminology when setting and announcing goals

- Understand the value of formally clarifying priorities

- Understand how priorities may impact procurement options

Goals & Targets

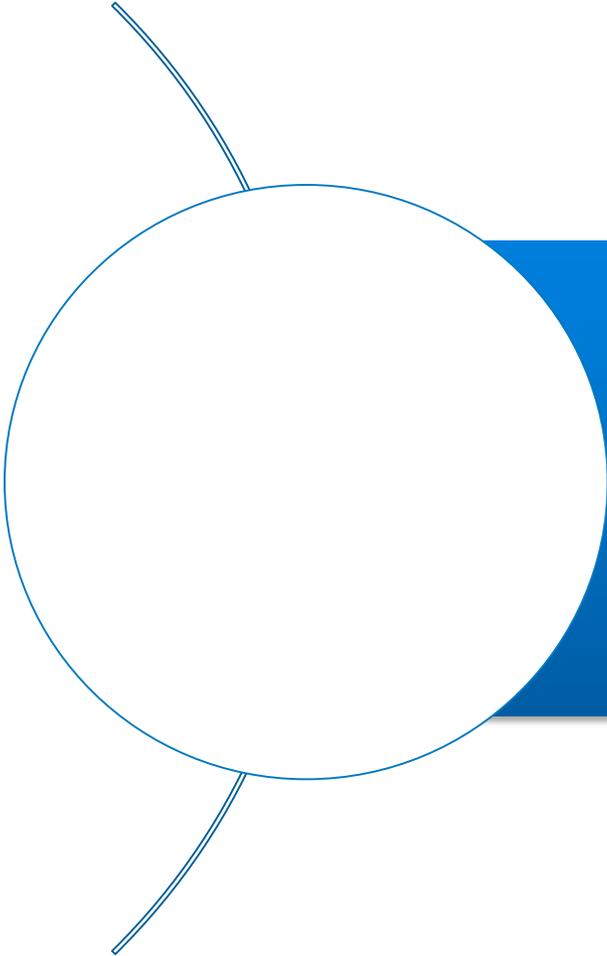# All goals are not created equal

- 50% renewable electricity by 2030
- 50% renewable energy by 2030
- 1,000 MW of renewable energy by 2030
- 1,000 MW of clean energy by 2030
- 50% carbon reduction by 2030
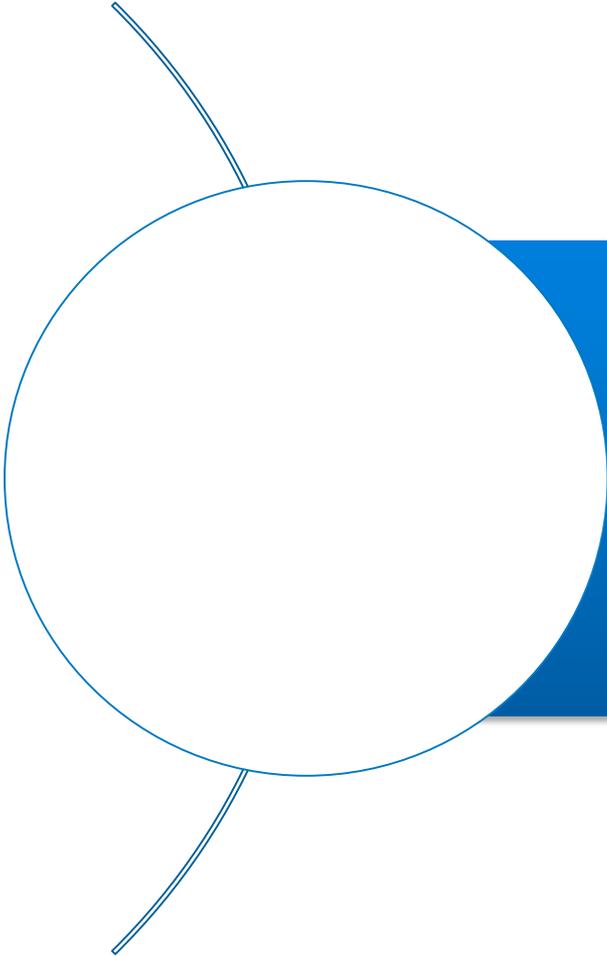- 50% reduction in criteria pollutants by 2030

Percentage Goals

50% renewable electricity by 2020

- Percentage goals are impacted by load growth
  - Electrification trends impact load
  - Predicting load growth can be challenging
  - Electrical demand fluctuates annually
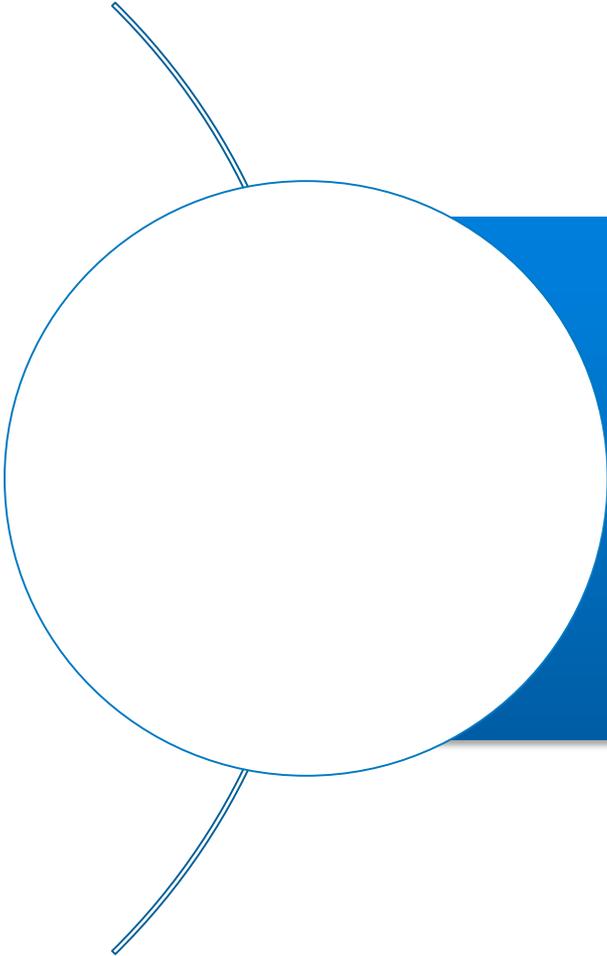- Efficiency measures can contribute to achieving the goal

Capacity Goals

1,000 MW of clean energy by 2030

- Load growth and efficiency measures do not impact achievement of capacity goals
- Measuring achievement is simple
- May limit environmental impact if not updated

Carbon or Broader Emissions Goals

75% carbon reduction by 2030

- Many variables to consider in road-mapping: changes in all sectors impact carbon emissions
- Biomass and landfill gas impact emissions goals differently than solar and wind technology

Terminology matters

Our city uses 100% renewable energy.

Our city uses 100% renewable electricity.

The city-owned buildings use 100% renewable electricity.

The city-owned buildings and facilities are net-zero.

"The city of Las Vegas is powered 100% by renewable energy."
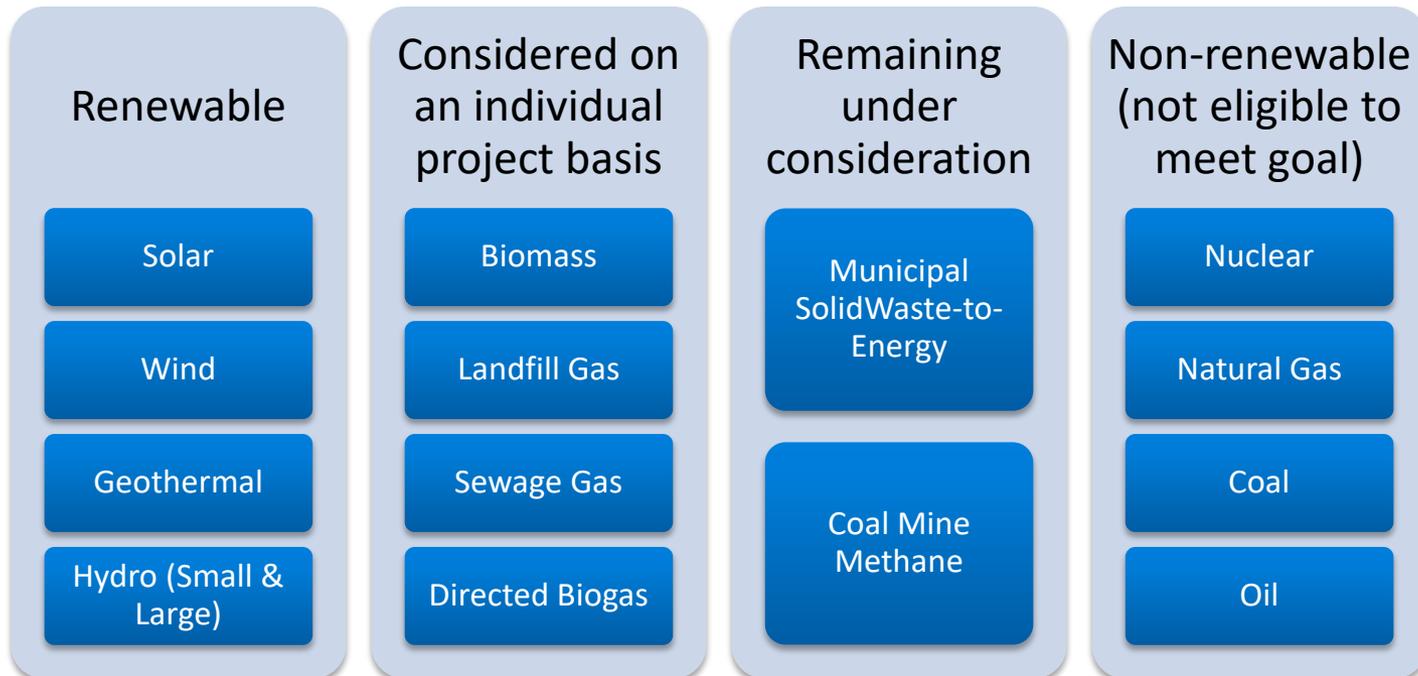

MOSTLY TRUE

Snopes

Clarifying Definitions and Priorities

➢ aids the identification of appropriate options

➢ reduces options analysis time

➢ eases complex decision-making

➢ increases transparency

What qualifies as "renewable"?

- Define which technologies will count toward the goal.
- Some renewable technologies are not emission-free, but may reduce net emissions.

City of Aspen's Definition of Renewable Energy Resources as determined by City Council

Renewable	Considered on an individual project basis	Remaining under consideration	Non-renewable (not eligible to meet goal)
Solar	Biomass	Municipal SolidWaste-to-Energy	Nuclear
Wind	Landfill Gas		Natural Gas
Geothermal	Sewage Gas	Coal Mine Methane	Coal
Hydro (Small & Large)	Directed Biogas		Oil

Different priorities point to different solutions & some may compete

- Cost (required ROI, at or below utility cost, price premium)
- Catalyze construction of new renewable energy projects
- Public engagement (Community solar, education, displays)
- Long-term electricity rate stability
- Use of local labor
- Back-up power at critical facilities (energy resiliency)
- Control or ownership of assets
- Use of local resources
- Nationally-sourced products
- Impact on carbon emissions reduction
- Meet renewable energy goal or target on schedule

Priorities Impact Procurement Options

Renewable Energy Certificates (RECs)	• Buy the environmental attributes associated with renewable energy generation, which are represented by the RECs, but does not buy the power.
Capital Investment	• Self-financed, self-managed renewable energy system. (Flip structure may address lack of appetite for tax credits.)
Power Purchase Agreement	• Buy power generated by a renewable energy system that is financed and maintained by a third-party.
Virtual PPA	• City guarantees the purchase of power generated by a third-party owned system at a certain rate, thus helping the project get financing. If the third-party sells the power on the market at a lower rate, you pay the difference. If it sells at a higher rate, city receives the difference. In either case, city receives the RECs.
Utility Green-Tariff	• Subscribe to an existing utility tariff or program for renewable energy

Conclusion

Critical Early Steps in Road-mapping for Renewables

- Clarify the goal
- Pay attention to terminology
- Clarify the technologies and project types that are considered eligible as "renewable"
- Clarify priorities
- Define procurement options that match priorities
- Engage stakeholders early
- Deliberately use definitions & priorities in options analysis