

EXAMPLE ENERGY PLAN GOALS

The language below demonstrates examples of energy goal language for different types of goals. Communities should tailor the language to match the format and level of detail in the rest of the Plan.

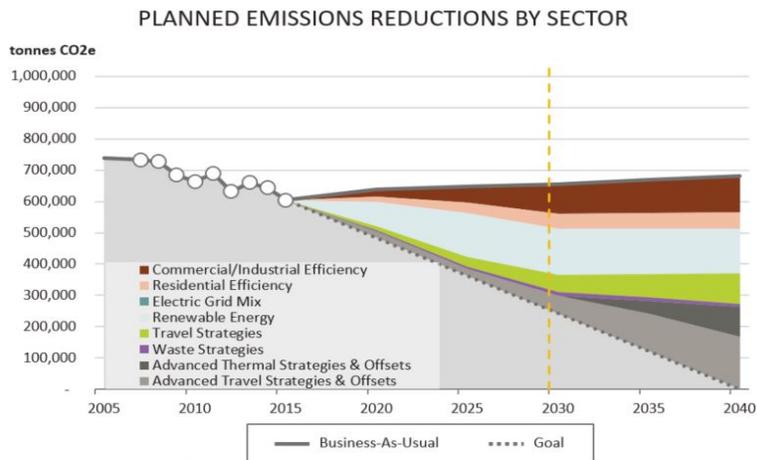
Set community energy or climate-protection goals

Community-wide Energy/Climate Goals

1. Consistent with State-wide goals, reduce greenhouse gas (GHG) emissions 80% from [Insert Year] levels by 2050.
2. Support the implementation of Minnesota's greenhouse gas (GHG) reduction standards through local action and investment.
3. Become a carbon-neutral community by 2040.
4. Reduce community wide use of non-renewable energy, across all sectors, by 80% by 2050.

Interim Energy/Climate Goals

1. Secure 100% of municipal facility electricity from renewable energy sources by 2025.
2. Reduce community-wide carbon emissions by 30% by 2030.
3. Achieve 100% carbon-free electricity community-wide by 2030.
4. Municipal operations are zero-net-energy/carbon by 2030.
5. The downtown district will be zero-net-carbon by 2030.



Set community energy resource development goals

Building and Transportation Efficiency

1. All new residential buildings will, by 2030, be zero-net-energy or zero-net-carbon.
2. Complete major energy retrofits to achieve ultra-low energy use standards on all residential buildings by 2040.
3. New commercial buildings meet net-zero energy building code standards by 2025.
4. 20% of the building stock meets zero-net-carbon (ZNC) standards by 2030.
5. Local vehicle miles traveled (VMT for local roads) decreases by 20% from 2016 benchmark by 2030 due to increased access to bicycle and pedestrian-friendly streets and paths.
6. Improve private and public infrastructure to accommodate and encourage use of autonomous vehicles.

Goal Examples

The most important goal to set is a broad goal acknowledging a target or outcome for the whole community. Four alternative community energy/climate goals are offered, and several sub-area or interim goals to complement the primary goal. Some goals include targets (achieve by a certain date) to emphasize that these are long-term goals. Target years are consistent with scientific consensus on necessary GHG reductions to limit global temperature rise to 2°C.

Efficiency

Both building and transportation efficiency goals will vary depending on community characteristics and geography. Fully developed communities (urban areas, regional centers) should focus goals on retro-fits and redevelopment. Growing suburbs should emphasize getting new construction right. Exurban and rural communities will have less emphasis on transportation mode shift as an efficiency resource, first and second tier suburbs have greater mode shift opportunity.

EXAMPLE ENERGY PLAN GOALS

Solar

1. Develop local solar reserves to generate the equivalent of 20% of community electric energy use by 2025.
2. Residents and business have the ability to purchase clean energy through the local utility produced by community solar/wind facilities by 2020.
3. By 2025, 20% of residents and businesses are purchasing solar or wind energy through the public utility.
4. Encourage rooftop and parking lot solar development to capture economical energy on developed land.
5. Facilitate solar development on lands that are poorly suited for other types of development, such as closed landfills, contaminated land, and industrial buffer areas.

Solar

Solar deployment comes in several forms that have distinct land use and development considerations. Different types of communities will need to address these forms (rooftop, commercial, community solar, and utility-scale solar) consistent with the development opportunities. For instance, communities with undeveloped land, particularly on the edge of the MUSA, should identify preferred locations for community solar development.



Biomass

1. Become a zero-waste community, with non-recyclable waste streams converted to energy production, by 2040.
2. Develop local biomass energy potential in the community's industrial and institutional facilities.
3. Expand biomass use for heating residential buildings, using certified low-emission wood stoves or boilers, to 10% of the city's housing units by 2025.
4. Propane and delivered fuel companies have low-carbon or carbon-free fuel options in place by 2025.
5. Increase use of biofuels (biodiesel, ethanol) and other low or no carbon fuels in private fleets.

Biomass

Biomass resources in the community will vary considerably by the type of community. Rural communities will have agricultural products and waste streams to consider, while urban communities may only have solid waste and tree waste. Also consider specific biomass opportunities associated with processing plants or other industry.

EXAMPLE ENERGY PLAN GOALS

Wind

1. Enable development of small wind energy systems where both wind resources and surrounding land uses are appropriate.
2. Support development of appropriate utility scale wind farms in land use plans and regulation.
3. Support and promote residents' participation in 3rd-party certified wind energy programs.



Wind

Urban areas generally have poor wind resources; development goals should reflect a realistic assessment of the wind resource. Rural communities will have wind resources and will need to assess the opportunities for both small (distributed) wind and large-scale development, or even wind farms.

Set goals for specific low-carbon or carbon-free technologies.

Building Systems

1. Identify the community's potential industrial combined heat and power (CHP) and district energy opportunities for existing businesses and future proposed industrial sites, and encourage development of CHP/district energy systems in industrial development and large-scale redevelopment efforts.
2. Commercial and industrial districts have micro-grid infrastructure and energy storage options for resiliency and expanded opportunities for on-site energy generation using local renewable fuels.
3. Collaborate with energy utilities on using city rights-of-way (ROW) for an electric grid that enhances opportunities for resident and business self-generation.

Building Technologies

Energy storage (primarily batteries) is a rapidly expanding technology. Storage is not a clean energy system or technology, but will change the value and the opportunities for local energy development. Advanced electric grid technology, such as "micro-grids" could similarly change the way that energy infrastructure on public ROWs is used.

Transportation Systems

1. City and corporate fleets located in the community's use 100% zero-emission vehicles or low-carbon fuels.
2. The community is "EV-ready" with electric vehicle charging stations in every public and private parking lot or ramp by 2025.
3. 50% of local vehicles (road-legal) are electric or powered by non-carbon or low-carbon fuels by 2030.
4. Prepare for deployment of autonomous vehicles.
5. Transportation infrastructure and systems are designed and managed to both reduce GHG emissions and increase mobility options for residents and visitors.

Transportation Technologies

Electric vehicles are already the least-cost (lifecycle basis) personal vehicle available. Cities have a critical role to play in the market transformation effort, by ensuring that refueling (charging) infrastructure accommodates the market demand for vehicles. Transportation energy is likely to be the largest source of GHG emissions for many communities.

EXAMPLE ENERGY PLAN GOALS

Set goals that capture co-benefits (improving equity, creating local jobs, improving habitat or water quality).

Equity Co-Benefits

1. Low-income residents participate in energy efficiency and renewable energy programs at the same rate as other households.
2. Affordable housing meets low-carbon or zero-carbon standards to improve affordability and reduce risk from fuel price increases.
3. Substantially increase participation of low- and moderate-income housing, (single- and multi-family) in energy efficiency programs, so that 80% of low- and moderate-income buildings having completed deep energy efficiency retrofits 2040.
4. Develop the community's efficiency and solar resources to create local jobs and diversify markets for local contractors and underemployed workers.

Co-Benefit Goals

Co-benefits are usually a reflection of community-specific opportunities and priorities. However, two co-benefits are consistent across most communities. Ensuring that the benefits of clean energy development are available to all types of households, and capturing environmental benefits, can be part of most communities' Plans.

Environmental and Resilience Co-Benefits

1. Principle-use solar development incorporates pollinator ground cover consistent with Minnesota's statutory beneficial habitat standards.
2. Critical public facilities have "renewable energy plus storage" installations to improve the resiliency of these facilities in event of weather or other emergencies.
3. Solid waste streams that cannot be recycled or reduced are used for energy resources, reducing GHG emissions and landfilling.



Source: <http://greatriverenergy.com/connexus-makes-solar-sweeter/>



Source: Habitat for Humanity