

Community Energy Strategic Planning

Better Buildings Alliance



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Step 5
Develop Energy Goals and Strategies

Community Energy Strategic Planning Process

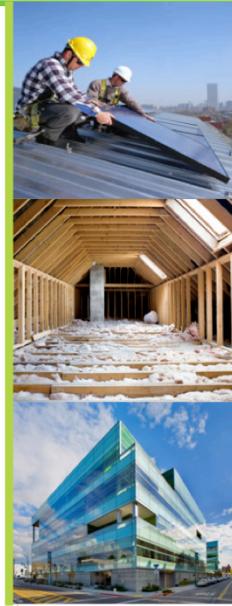


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Step 5: Develop Energy Goals & Strategies

1. Choose effective goal language
2. Develop clear and measurable goals
3. Identify strategies for achieving goals
4. Integrate input from stakeholders
5. Publicize goals and strategies



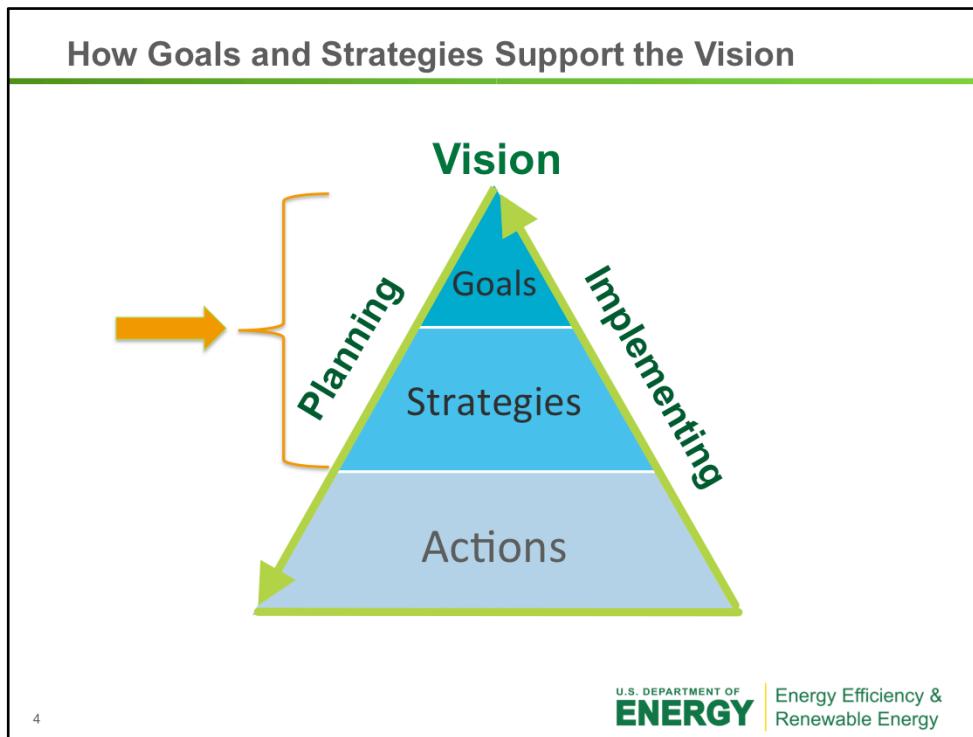
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Speaking Points:

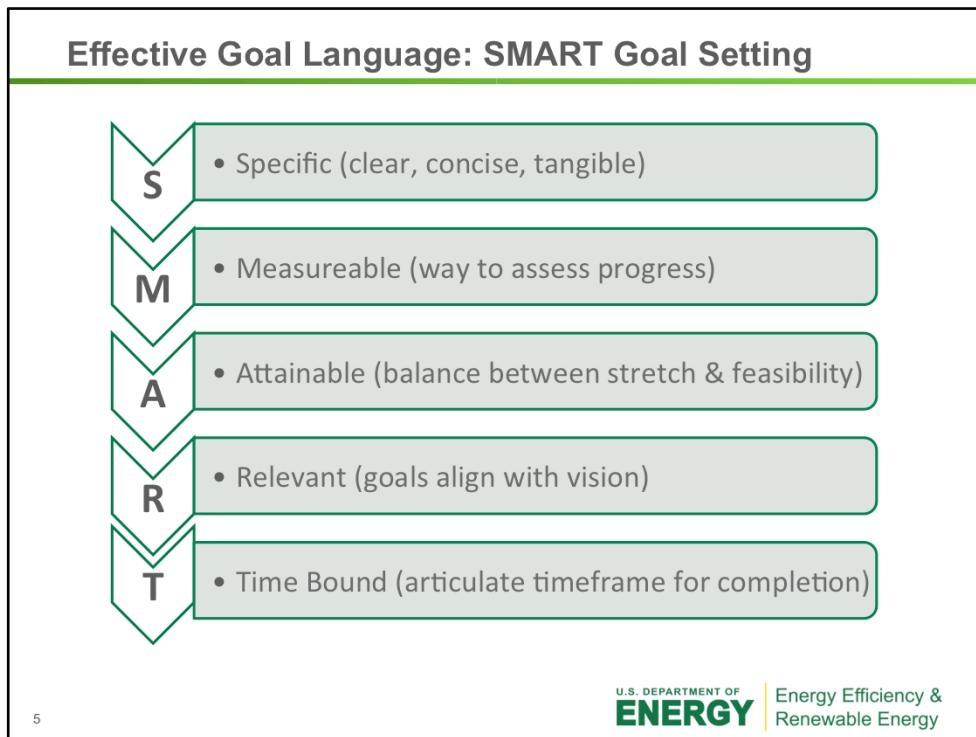
- Be sure to present goal and strategy ideas to stakeholders, and use their input to assure that goals and strategies reflect broad buy-in.
- Engage stakeholders early to hear their thoughts and ensure their backing, and take the opportunity to challenge stakeholders to think of how they could help support and advance these strategies.
- Goals and strategies that kindle interest and excitement can be critical to capturing the public's interest and stimulating their understanding of and involvement in the CESP. Keep goals and strategies visible as discussion moves to actual on-the-ground actions to include in the CESP – this helps keep discussion on target and builds momentum for implementing the plan.



Speaking Points:

WHAT: Informed by the results of the energy profile, tangible long-term goals and nearer-term strategies provide a pathway from the conceptual energy vision to concrete, cost-effective actions. (We'll discuss actions a little later on today, but these are the wide range of policy, program, and project options a jurisdiction might choose to take on to accomplish goals/strategies.)

WHY: Clearly defined goals and strategies will form the framework for the rest of the plan's design and guide decisions about what actions (including policies, programs, and projects) will be proposed. Goals and strategies also help to communicate the specific value of efforts to key audiences and provide a basis for tracking and measuring progress.



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Speaking Points:

Energy goals represent high level, medium to long-term targets, often for broad energy use sectors or government jurisdictions that will move the community toward its vision. To be most effective, goals should articulate broad targets or behaviors desired for the future and identify what must be accomplished.

Goals are most effective if they are easy to communicate and clear to follow. Develop the CESP goals in the form of “SMART” goals:

Specific – Ensure goals are clear and have enough detail that what it will take to meet them is easy to understand. For example: “Reduce energy use, **both electric and fossil fuel**, in Smallville’s **municipal buildings**”.

Measureable – Ensure there is a way to assess whether the goal has been met. For example: “Reduce energy use, both electric and fossil fuel, in Smallville’s municipal buildings **by 20% over 2009 levels**”.

Attainable – Establish goals that are a stretch to achieve, but be sure they are feasible –

Clear & Measurable Goals

- “Make all City of Austin facilities, fleets, and operations totally carbon neutral by 2020.”
– *City Council of Austin, Texas*
- “Reduce total, current, community-wide fossil fuel consumption by 50% by 2030.”
– *Climate and Energy Action Plan, City of Eugene, Oregon*
- “Achieve 80% reduction in greenhouse gas emissions...by 2050, using baseline data from 2005.”
– *Climate Action Plan, City of Lawrence, Kansas*

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Speaking Points:

Plans usually contain more than one kind of goal – combine different goals in different “topic areas” that support the vision.

Include a “headline” goal to describe an overall target. These are examples of those types of goals.

Then delineate goals by energy use sector and/or agency jurisdiction and set one or more high-level goals for each category that resonates. For example:

Local government CESP – Government buildings, other operations, transportation expenditures

Community-wide CESP – Buildings (residential, commercial, and industrial) and community-wide transportation

Clear & Measurable Goals

- Frame each goal by how they
 - Relate to local priorities
 - Will be measured
- Decide at what levels to set targets
 - Data in energy profile
 - Goals of other similar jurisdictions
 - Regional/national initiatives
- Examine the goals collectively
 - Map to vision
 - Congruency
 - Mix of time horizon



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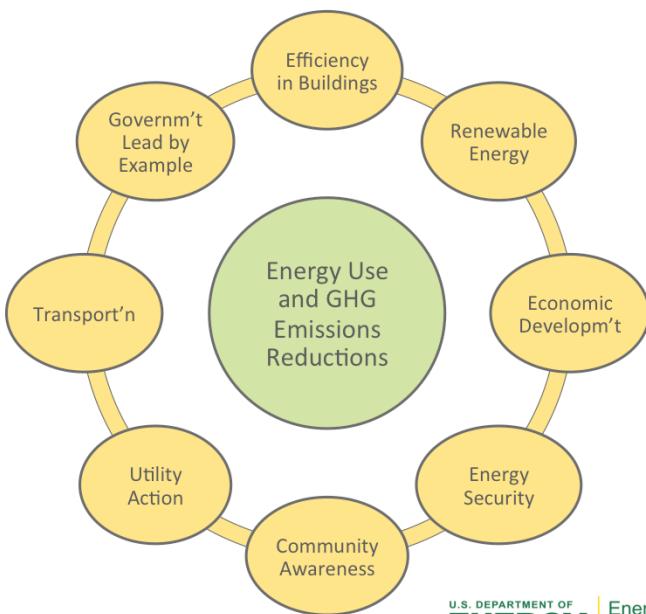
Be sure to frame goal statements so that they provide a basis for understanding progress:

- Frame goals in terms that are **related to local priorities**. For example, if the vision seeks to attain economic development and job creation, frame goals in terms of jobs created or new businesses attracted.
- Frame goals by **how progress will be measured** and recognized (the metric or key indicator to be monitored). For example: attain a defined reduction (actual or %) in a given metric (e.g., kWh, cost savings, vehicle miles traveled, fossil-fuel consumption).

Decide at what level targets should be set:

- The “right” level depends on the nature of the government or community, how it uses energy, and the potential for change.
- Review the energy data from Step 4. It will provide information on trends, performance, opportunities, and needs, all of which can help identify a reasonable rate for future progress.
- Evaluate past projects and best practices of higher-performing facilities or programs to determine the feasibility of transferring these practices to other parts of the government operations or community.
- Review goals of other similar jurisdictions to assess potential for your community or operations.
- If appropriate, sign on to regional and national initiatives – they will often provide structure, support, and technical assistance, along with an appropriate target range. For example, the DOE Better Buildings Challenge encourages building owners to **“Make reduce energy use across building portfolios by 20% by 2020”**. Support is provided through technical assistance and proven solutions to

Common Goal Topics



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Government Lead by Example

Reduce combined energy use from electricity, natural gas and steam in audited City buildings and facilities by 15% by December 31, 2015 — *Duluth, MN*

Make all City of Austin facilities, fleets and operations totally carbon neutral by 2020 — *Austin, TX*

Lower City government energy consumption by 30 percent by 2015 — *Philadelphia, PA*



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Efficiency in Buildings

Implement the most energy efficient building codes in the nation and aggressively pursue energy efficiency retrofits and upgrades to existing building stock – *Austin, TX*

Improve residential and commercial energy efficiency in Milwaukee – *Milwaukee, WI*

Reduce the total energy use of all buildings built before 2010 by 25 percent – *Portland, OR*



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Renewable Energy

Purchase and generate 20% of electricity used in Philadelphia from alternative energy sources by 2015 – *Philadelphia, PA*

62 million kWh and 2.7 million therms of renewable energy usage, annually, to meet local needs – *Oakland, CA*

Produce 10% of the total energy used within Multnomah County from onsite renewable sources and clean district energy systems. – *Portland, OR*

Increase the percentage of renewable energy used in new buildings citywide to 60% by 2020 – *Irvine, CA*



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Economic Development

Cultivate an innovative and sustainable economic infrastructure that creates 20,000 green jobs by 2020 while building on our economic strengths and adding to our competitiveness in the global economy – *Miami-Dade Co, FL*

Loudoun County will be recognized as a location of choice for investment in part because of its innovative energy strategy. – *Loudoun Co, VA*

Double the number of low and high skill green jobs by 2015 – *Philadelphia, PA*



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Community Awareness

Involve 100% of Irvine residents and businesses in the Energy Plan – *Irvine, CA*

There is a culture of energy efficiency and conservation within the City's municipal, commercial, institutional, and residential communities – *Lebanon, NH*

Develop and implement a program to assist all citizens, businesses, organizations and visitors in achieving carbon neutrality – *Austin, TX*

Motivate all Multnomah County residents and businesses to change their behavior in ways that reduce carbon emissions – *Portland, OR*



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Transportation

Reduce gallons of gasoline used by City fleet vehicles by 12% by June 30, 2014 – *Duluth, MN*

20% reduction in vehicle miles traveled annually as residents, visitors and workers meet their daily needs by walking bicycling, and utilizing transit – *Oakland, CA*

The City of Lebanon has an economically sustainable, multi-modal transportation network, and municipal vehicle fleet- *Lebanon, NH*



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Methods for Choosing Goals



Emulate Others



Up the Ante



Research Based



Leadership Priorities



Piggyback on State/Regional



Package Existing Goals

Calibrating Goals



- Unlocking Energy Efficiency in the US Economy, July 2009, McKinsey and Company.
"The US economy has the potential to reduce annual non-transportation energy consumption by roughly 23 percent by 2020."
- NREL's Renewable Resource Data Center (RReDC) provides access to an extensive collection of renewable energy resource data, maps, and tools
- IECC 2012 building code: <http://www1.eere.energy.gov/buildings/codes.html>
- Commercial and industrial buildings 20% more efficient by 2020 (Better Buildings Challenge)
- Greenhouse Gas Emissions:
 - 80% by 2050 (IPCC)
 - 17% by 2020 from 2005 levels (President's Climate Action Plan)

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Baselines v. Targets Example - Philadelphia

| 2008 BASELINE | 2015 PROJECTION | GREENWORKS TARGET | GREENWORKS INITIATIVES WILL YIELD |
|--|--------------------|---------------------------------------|------------------------------------|
| TARGET 1: MUNICIPAL GOVERNMENT ENERGY USE | | | |
| 3.64 trillion Btus | 4.16 trillion Btus | 30% < 2008–2.54 trillion Btus | 1.62 trillion Btus saved in 2015 |
| TARGET 2: CITYWIDE BUILDING ENERGY USE | | | |
| 99.7 trillion Btus * | 103 trillion Btus | 10% < 2006–89.7 trillion Btus | 12.9 trillion Btus saved in 2015 |
| TARGET 3: RESIDENTIAL WEATHERIZATION | | | |
| 3,500 projects | 28,000 projects | 15% of total housing–100,000 projects | 72,000 additional projects by 2015 |
| TARGET 4: ALTERNATIVE ENERGY | | | |
| 0.34 million MWh | 1.35 million MWh | 20% of electricity=2.93 MWh | 1.58 million MWh in 2015 |



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| Identify Strategies for Achieving Goals | | | |
|--|---|---|--|
| Goals | Metrics | Strategies | Actions |
| High-level target in terms of broad categories and sectors | Quantitative measure of progress toward goal with both target and baseline period | More-detailed objectives that articulate general approach toward achieving goal | Specific measures that, when implemented, will help accomplish the goals |

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Speaking Points:

While goals provide high-level targets in terms of broad categories, strategies provide more detailed sub-goals or objectives that begin to break down the goal into focused and measurable components. Strategies are designed to articulate the specific approaches that collectively will achieve the goals.

The same basic rules of thumb for **effective goal statements** hold for statements of strategy

Ideas for identifying strategies can also come from the energy assessment – review the result of the profile prepared in Step 4 and target areas with:

- Highest impact to savings in energy and/or costs.
- The most room for improvement in energy and/or costs.
- Great success – do more of what you know works!
- The most government and community strengths and resources.
- Connections to other community priorities (e.g., job creation, education).
- Opportunities to make changes easily – early successes are good publicity.

Goal/Strategy/Action Organization – Miami Example



Identifying Strategies to Accomplish Goals

- Need to have sufficient capital
- Implementation know-how
- Dedicated staff
- So how do you approach this and create a methodology?
 - Energy roadmap to connect objectives to optimal projects and sequence of activities.
 - Create a matrix or projects with paybacks, ROI, time to implement, least costs projects first etc. and apply screens, SWOT analysis
 - Efficiency comes first
 - Involve participants

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Resources for Strategy Ideas

- General Ideas
 - New Energy Cities Profiles in City-Led Energy Innovation
<http://newenergycities.org/files/powering-the-new-energy-future-from-the-ground-up.pdf>
 - EPA's Climate Showcase Communities Program
<http://www.epa.gov/statelocalclimate/local/showcase/index.html>
 - U.S. Mayor's Climate Protection Handbook
<http://www.icleiusa.org/action-center/planning/climate-action-handbook>
- Policies - ACEEE Local Energy Efficiency Policy Calculator
<http://aceee.org/portal/local-policy/calculator>
- Buildings - R20 Building Efficiency Guide for Governments
<http://regions20.org/sites/default/files/Building%20Efficiency%20Guide%202013.pdf>
- Solar - DOE's Solar Powering Your Community: A Guide of Local Governments
http://www4.eere.energy.gov/solar/sunshot/resource_center/sites/default/files/solar-powering-your-community-guide-for-local-governments.pdf

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| Step 5: Tips & Tools | |
|--|---|
| Tips | Tools |
| <ul style="list-style-type: none"> • Adopt energy goals that achieve other goals too • Involving local leaders at this stage increases the likelihood that they will participate in implementation phase | <ul style="list-style-type: none"> • <u>Goals, Strategies & Actions Planning Worksheet</u> |

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Speaking Points:

- There are advantages of adopting energy-related goals that incorporate or address other community needs. Such shared outcomes can help establish support for the plan's elements. For example: Increased transit ridership saves energy and reduces traffic congestion; saving energy in school buildings will increase available budgets for other expenditures, such as teacher salaries.
- Local leaders – government, business, civic, environmental – who are engaged in the process of setting goals and choosing priorities are more likely to contribute to successful execution of the plan.