III. Achieving San Carlos' Reduction Target

In June 2008, the San Carlos General Plan Advisory Committee (GPAC) formed the Climate Action Plan (CAP) Subcommittee and charged them with performing the in-depth analysis needed for a Climate Action Plan. In August 2008, using the information from the baseline Greenhouse Gas Inventory as a guide, the Subcommittee developed a Strategic Policy Focus to guide the development of the Climate Action Plan and associated emissions measures. This Policy Focus highlights those emission sources that would have the greatest impact on reducing emissions within the City. Throughout the Climate Action Plan development process, the CAP Subcommittee was responsible for reviewing and analyzing strategies consistent with this policy focus and aimed at reducing greenhouse gas emissions.

San Carlos Climate Action Plan Strategic Policy Focus:

1. Building Efficiency/Site Design
2. Auto Emission Reduction
3. Low Carbon Energy Use
4. Alternative, Non-Automotive Travel Modes
5. Waste Reduction Program

Over 100 strategies were initially considered by the Subcommittee. This list was reduced and modified during several Subcommittee meetings and at a community workshop on September 25, 2008. Workshop participants discussed the proposed reduction measures and provided their thoughts on which were most effective for the unique community of San Carlos. The public workshop comments, along with emails, public comment, and City staff input, culminated in the 23 reduction measures analyzed in this report.

Community participation is essential in the development of a Climate Action Plan because, in the end, it is the people of San Carlos who will drive change and make the sacrifices necessary to reduce emissions. Developing and implementing the measures included in this Plan will require continuous effort and collaboration among businesses, residents, and the City.

Structure

San Carlos' 23 reduction measures are separated into three chapters for analysis: Energy, Transportation and Land Use, and Solid waste. Each reduction measure has its own greenhouse gas reduction goal and is supported by one or more components. The reduction goal of each measure is based on current knowledge and science. If for some reason science, technology, or politics change in the future, the components of each reduction measure can be modified or added to as long as the total greenhouse gas reduction adds up to that measure's goal. This structure of tying the reduction target to the measure rather than the measure's individual components will allow for flexibility and will ensure that San Carlos meets, if not exceeds, our overall reduction target of 35%.

The components of each reduction measure have the following structure:

- Description: A short description of the overall goal of the reduction measure.
- Initial cost analysis: An estimate of initial cost to the City of San Carlos for implementing each individual component and the methodology used to calculate this estimate. Costs included in the estimate are mostly for staff time and for materials such as trees or hybrid vehicles. Costs are not adjusted based on planned implementation timeline.
- Emissions reductions analysis: An estimate of the reduction in greenhouse gas emissions caused by the component. The emission reduction is provided in metric tons of CO_2 equivalent (CO_2e).

Finally, the end of each chapter includes a discussion of San Carlos's activity to date in achieving our reduction target. This includes an estimate of where San Carlos currently stands in reducing emissions to the level outlined in each chapter.

Methodology: Initial Cost analysis

Each reduction measure includes an estimate of initial cost to the City based on current research, case studies, and the experience of City staff. These estimates are non-amortized approximations of first-year costs to the City for Staff time and materials. Although a payback analysis is possible for some measures, only the initial costs were calculated to maintain consistency. For instance, while it is relatively easy to calculate a payback and internal rate of return for hybrid car purchases, it is difficult to calculate a payback for bicycle-friendly intersections.

In the summary table of each measure, the cost per metric ton of CO_2e reduction is calculated. Although this is a good estimate of value to use for comparison, it is important to consider rates of return, social factors, and City preference when comparing reduction measures. The initial costs can be updated as more information is available.

Methodology: Greenhouse Gas Emissions Reductions Analysis

The emissions reductions estimate for each measure uses the Climate and Air Pollution Planning Assistant (CAPPA) tool developed by ICLEI. The tool was created to assist local governments in developing customized plans for reducing climate change. CAPPA provides information and quantification tools for over 100 emission reduction strategies in its current form. City-specific data is entered into the CAPPA software and combined with emission coefficients and current research. Where a CAPPA reduction analysis wasn't applicable, current research and City data was compiled to create an estimate or to display that an estimate is not currently possible. Appendix B details the sources and input data for the estimates of greenhouse gas emissions reductions.