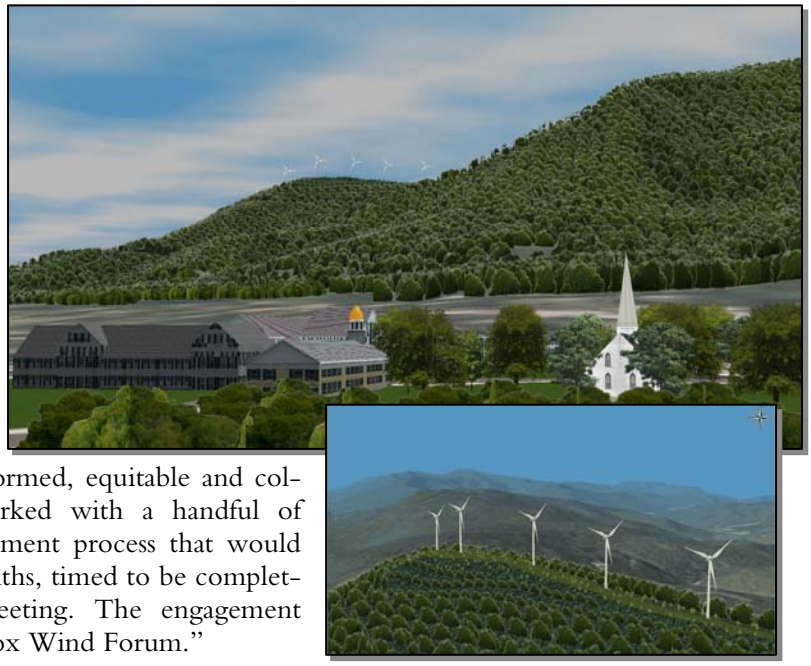
Wind Farm Visualization

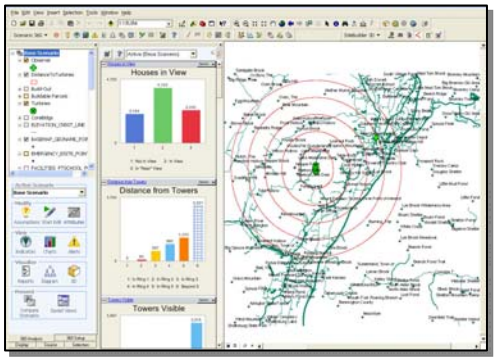
"What would five turbines look like on 'our' mountain?"

Location: Manchester, VT
Partners: Town of Manchester; Village of Manchester; The Orton Family Foundation; Consensus Building Institute; Placeways LLC

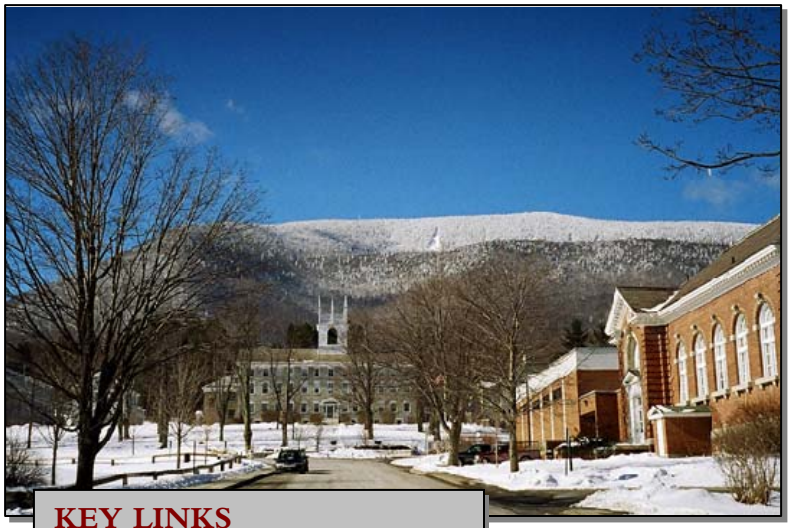
Context: Residents of the Town of Manchester love their mountains and frequently refer to them by name. It is no surprise, then, that local Town Plan policies call for maintaining the ridgetops. But Plan policies also call for supporting renewable energy projects, so when a Maine-based wind development company proposed the construction of five modern wind turbines atop Little Equinox Mountain, spirited conversations were assured. In order to channel the passions into an informed, equitable and collaborative process, the Town worked with a handful of partners to design a citizen engagement process that would take place over a period of five months, timed to be completed prior to the annual town meeting. The engagement process was called the "Little Equinox Wind Forum."



The Forum addressed many issues—site planning, ecology, energy, and economics—but from the outset, it was clear that visual impact would be a key concern to residents who were accustomed to an uncluttered view of "their" mountain. Project partners engaged Placeways LLC to create a detailed visual model of the proposed project so that residents could see for themselves just what the proposed turbines would look like.



Project Description: The Forum as a whole made use of a series of five informational meetings, each addressing one or more distinct issues related to the proposal, and a culminating all-day Wind Summit. Each meeting had information available from panels of experts and in summary write-ups of peer reviewed studies. Presentations were followed by ample time for Q&A. Between meetings, residents could post their questions and concerns on a "rolling list" kept open throughout the process so that questions could be assembled and addressed in an orderly fashion. Information boxes were available at the Town office and the library, and information was posted on the Town website. The local newspaper and community access television station collaborated by focusing on the issues, scheduled in concert with the series of meetings.



KEY LINKS

CommunityViz
http://www.communityviz.com
The Town of Manchester
http://www.town.manchester.vt.us
The Orton Family Foundation
http://www.orton.org
Placeways, LLC
http://www.placeways.com
Consensus Building Institute:
http://cbuilding.org

One meeting was devoted exclusively to aesthetics. Using a partly customized version of CommunityViz®, Placeways developed a detailed 3D model of the project site and the surrounding area. The model served as an objective tool that let residents fly around helicopter-style and "see" the proposal from anywhere, including their own neighborhoods or favorite gathering places in the community. The topographically and geographically correct scene included photo-realistic models of iconic downtown buildings and historic sites as well as technically accurate models of the proposed turbines, including rotating blades and night lights. As a double check on the accuracy of the model, model images were compared with static photo-simulations prepared by a landscape architect retained by the regional planning organization. Videos of the scene were readily available, and a free, fully navigable scene was made available online or via DVD. In addition to being the focus of one of the informational meetings, the visualizations were an important part of the final Wind Summit, at which participants voiced their opinions in facilitated table discussions and via keypad polling.

Technology and Tools: Placeways used CommunityViz SiteBuilder 3D™ to develop the 3D scene and ModelBuilder 3D and Creator to craft the wind turbines and other important objects. Other tools and processes used in the Wind Forum process included a series of informational meetings, panels of experts, facilitated table discussions, summaries of peer-reviewed studies, a rolling list of issues, the town website, weekly meetings of a core project planning committee, keypad polling at the final Wind Summit, and active participation by local print and television media.

Outcomes: The process was successful in improving residents' knowledge of the proposal and related impacts. It was also successful in creating an atmosphere of civil discourse, although no clear "yea" or "nay" consensus resulted. The wind developer elected not to pursue state approval for the project. However, if and when a new wind proposal is made, the developer, elected officials and the community-at-large will be much better equipped to consider which kinds of concerns should be addressed in project design and in any approval process.

An important result of the process was that participants felt they gained a realistic sense of how the proposed project would appear. Regardless of whether they liked or disliked the view, participants uniformly reported that they understood its visual impact. During keypad polling at the Wind Summit, 94% of participants indicated they had enough information on visual impacts, while 80% felt they had enough information about impacts on property values and direct energy and financial benefits to the community.

> *"The [CommunityViz] visualization software was especially helpful….its real value was in taking a 'tour' of the town so people could see the impacts for themselves."*
>
> – Harley Lee, Endless Energy Corporation

Sources: Town of Manchester; the Orton Family Foundation; Endless Energy Corporation. Photo courtesy of Lee Krohn. CommunityViz is a registered trademark of Placeways LLC.