A scenic view of a river flowing through a wooded area. On the left, there is a concrete dam structure with a grassy embankment. The river flows towards the background, surrounded by bare trees. In the foreground, a dark metal bridge railing is visible. The sky is clear and blue.

Energy Generating Artwork for Willimantic: A Roadmap

LAND ART GENERATOR INITIATIVE COMMUNITY WORKSHOP

LAGI Community Workshop
Friday March 3, 2017
Willimantic, Connecticut
Eastern Connecticut State University



On March 3, 2017, the Institute for Sustainable Energy (ISE) at Eastern Connecticut State University and the Connecticut Department of Economic and Community Development (DECD) Office of the Arts hosted the Land Art Generator Initiative for a workshop in Willimantic.

Participants in this afternoon “think tank” put their heads together around the design challenges of a prominent site on Bridge Street in the heart of Willimantic. The site is owned by the Willimantic Whitewater Partnership (WWP) who is interested in bringing forward the best ideas for how to utilize the parcel, which they have recently remediated and prepared for development.

During the workshop, community members investigated how renewable energy technologies can be incorporated into public art and creative placemaking opportunities so that the intervention on this exciting site will bring the greatest benefit to the city and its people.

The WWP site offers the perfect opportunity to integrate renewable energy, with a richness of resources, including hydro, solar, and wind (as was made evident on the extremely blustery March day of the workshop!). The site, in such a prominent location in downtown Willimantic, is ideally situated to be a catalyst for economic and community development.

Connecticut
still revolutionary

Department of Economic and
Community Development
Office Of The Arts



land art generator initiative
RENEWABLE ENERGY CAN BE BEAUTIFUL



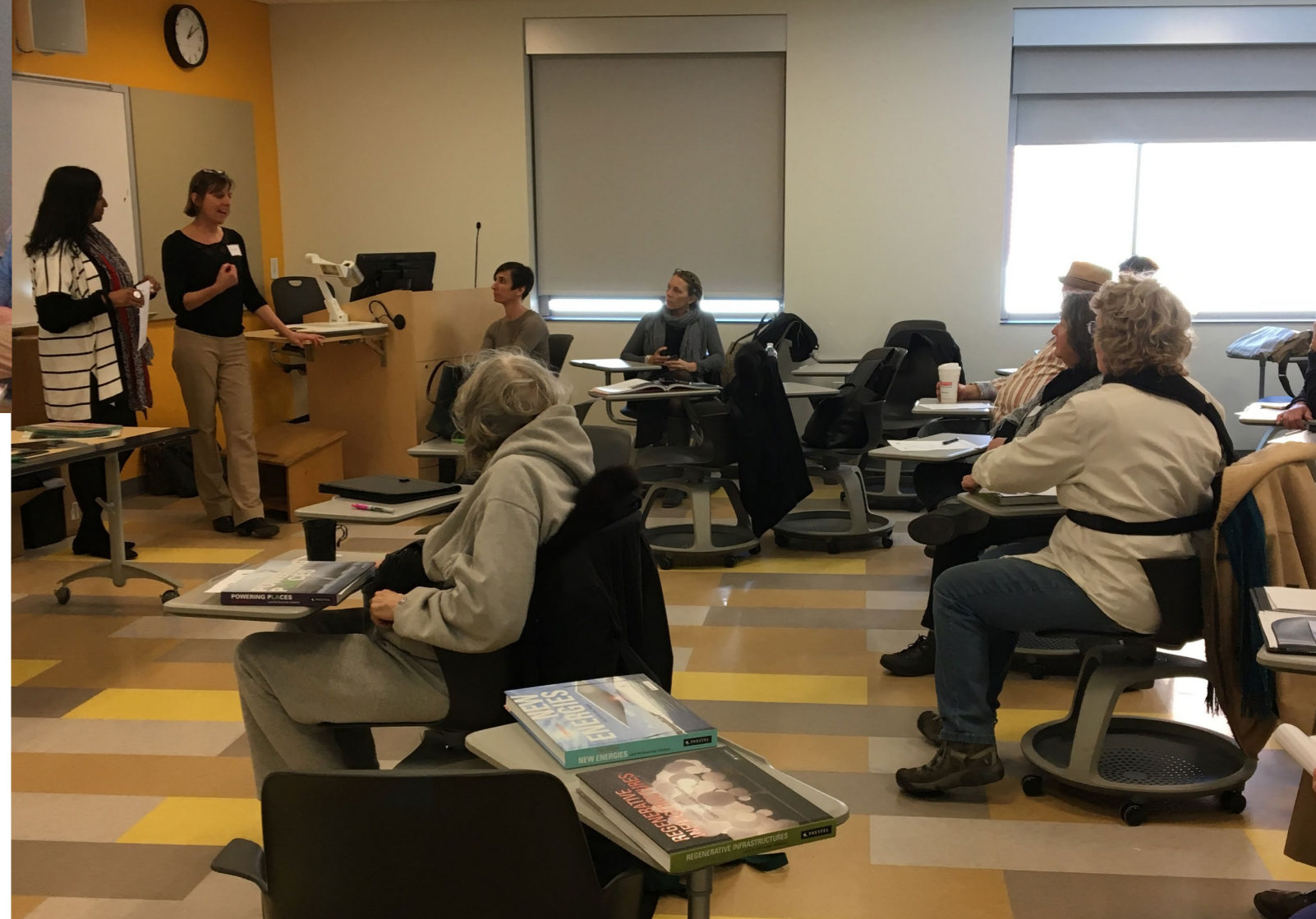
Setting the Stage

Lynn Stoddard, Director of ISE and Kristina Newman-Scott, Director of Culture at the Office of the Arts, opened the event together with reference to the aspirations of the State of Connecticut in arts and sustainability.

The Land Art Generator Initiative founding directors Elizabeth Monoian and Robert Ferry followed with a presentation about the history of energy in our cities and

landscapes and how LAGI is bringing forward creative ideas for beautiful infrastructures that can help to combat climate change.

Jim Turner, President of the Willimantic Whitewater Partnership presented a history of the site and the objectives of WWP, with help from Herb Bush, the civil engineer who managed the recent site mitigation project.





Understanding the Design Site:
History, Natural Energies, Community Context



Highlights from the Willimantic Whitewater Partnership presentation include:

1

There is a history of energy around the property.

Hydro power provided much of the energy used to run the Smithville cotton mills. Two generations of dam expansions provided increases in power output. There still remains the option to bring small scale run-of-the-river hydro power generation back to the site.

After the mill closed a gas station opened at the site. The underground petroleum tanks were removed as a part of the site remediation.

The small building that still remains on the site was also a place for Willimantic residents to pay their residential oil bills.

2

A berm has been created during the site remediation process adjacent to the railroad tracks. The berm has great southern exposure throughout the year and could make an ideal canvas for a community solar project.



3

Community outreach has been and will continue to be an important part of the process for realizing the redevelopment of the WWP site.

A series of workshops, community clean-ups, and volunteer studies have helped to guide the project through the present day.

Schools such as the Charles Barrows K-8 have dedicated project based learning modules to the subjects of hydro power and city planning around the WWP site.

4

The easement that runs through the site on the south bank provides a great opportunity for a grid connection and collaboration with the utility company.



Site History

“In 1822, Charles Lee purchased a mill privilege on the east side of present-day Bridge Street and erected a large stone cotton mill. The mills were later known as the Smithville mills. Meanwhile, Matthew Watson, Nathan Tingley, and Arunah Tingley of Providence, R.I., purchased water rights and land just upstream on the west side of Bridge Street. Where earlier there had been a sawmill and gristmill, Watson and the Tingleys built a large stone mill to manufacture cotton cloth, along with houses for themselves and their workers. The

Windham Cotton Manufacturing Company, as their enterprise was called, prospered and remained a major textile producer well into the 20th century. In 1907, the mills on both sides of Bridge Street were combined into a single operation. Today, the mills at this location are gone, though two dams, some foundations, some of the mill-worker houses, a former storehouse and a former company store remain standing.”

Source
www.past-inc.org/Willimantic/overall_history.htm

Program: Things to do on site

A group discussion focused on more deeply understanding what activities will occur on the site and what the aspirations of the community are.

Programming Goals

- Kayak Launch and Whitewater Course
- River Walk
- Small Commercial
- Public Park
- Water Rescue Facility
- Public Performance Venue
- Practice Pool for Kayaking Beginners
- Dog Park
- Playground for All Ages
- Trail Hub and Connection to the East Coast Greenway
- Parking
- Urban Gardening (raised beds)

Development Goals

- Increased Tourism
- Beautification
- Recreation
- Power Generation
- Sustainable Design
- Community Engagement
- Educational Opportunities
- Economic Development
- Urban Revitalization
- Model for other Cities



Idea Generation



Highlights from Group 1

- Beauty
- Quirkiness
- Sense of community
- Affordable clean power
- Innovative nationally. Other cities will look to Willimantic as a model
- Town on cusp of greatness
- Thread capitol of the world
- What happens to building on site?
- Tourist destination
- Multifaceted uses
- What happens on July 4?

Highlights from Group 2

- Trails connect
- Use local talent
- Mimic old wheels
- Use old tech
- Hub for recreation
- Provide a place to take a break for university and high school students
- History of hydro power
- Celebrate grid connection as “thread”
- Use the concept of thread as a sculptural element in some way
- Honor the history of the old building
- Provide a solar canopy for events
- Power Willimantic!
- Is there a way to produce a significant percentage of the city’s electricity?

Highlights from Group 3

- Charging Station
- Solar panels to reflect old mill architecture
- Fun/enjoyable–play
- Solar panels for interaction
- Blocks interchangeable
- Restaurant for hikers, bicyclists,
- Safety considerations
- Needs to feel comfortable
- Lighting
- Solar roadway/walkway
- Accessibility for everyone, not just about whitewater rafting and kayaking
- Donor naming opportunities
- Energy playground
- App for gamification
- Maze or labyrinth potential
- Historic design references: bricks and stones in the design of the solar panels



Next Steps

It was unanimously agreed by the workshop participants that an energy generating artwork would add visibility to the project, opportunities for increased public engagement, and reduce the carbon footprint of the development, with the potential to generate 100% or more of the site's energy demand. Next steps include:

- Design Procurement
- Implementation and Operations
- Possible Funding Mechanisms

DESIGN PROCUREMENT

There are a number of potential design delivery models. Each comes with benefits and limitations.

Following are three examples.

There is the potential to combine aspects of each and utilize different models for separate site components.

1. Design Competition

- Open call vs. Invited call
- Local vs. International (there was an emphasis in the workshop on keeping a competition local or regional)
- Focus on universities and/or technical schools such as ECSU and Three Rivers in which the competition can be integrated in curriculum for capstone classes. May also be open to professional teams.
- **One-stage competition** between a few teams, or a **two-stage competition** to invite a second round of design detail from teams who are selected from an open call.
- Community engagement can be a part of the development of the design brief requirements as well as part of the selection process.

TIMELINE (approx.)

4 months	project programming and scoping
6 months	competition results and selection process
4 months	second stage (if applicable)
6 months	detailed design for construction

2. Requests for Proposals

- A shortlist of pre-qualified professionals is asked to submit a technical and financial proposal based on a detailed scope of work and creative brief.
- Connecticut DECD can provide models for RFPs.

TIMELINE (approx.)

4 months	project programming and scoping
2 months	issue RFP
3 months	response and selection
6 months	detailed design for construction

3. Participatory Design

- Include schools, community leaders, and creative professionals
- A local artist and a design firm with experience in design through civic engagement detail the outcomes of multiple design charrettes with local residents and present a holistic solution that reflects the desires of the community.

TIMELINE (approx.)

4 months	project programming and scoping
4 months	planning
3 months	workshops and idea generation
6 months	detailed design for construction

IMPLEMENTATION AND OPERATIONS

1. Develop interest quickly by utilizing the small structure on site as an ideas hub

- Rolling exhibition of ideas at building on site
- Artist in residence (sculpture professor)
- STEAM Education Activities
- Idea "drop-off" hub

2. Plan a phased approach to fundraising

- Implement "Solar Powered Ideas Hub"
- Planning the approach (determined the design delivery model and project scope)
- Ideas competition
- Detailed design stage
- Construction
- Operations, maintenance, and continued programming at the site

POSSIBLE FUNDING MECHANISMS

There are many potential sources for funding for this project as a consequence of its interdisciplinary nature.

Some might include:

- National and regional grant opportunities for design and art in public space
- National and regional grant opportunities for renewable energy projects
- Financing for community energy through the Connecticut Green Bank and others
- Funding for urban revitalization and economic development
- Various business models for revenue generation at the site and return on capital investment
- Power generation provides income for operations and site maintenance
- Corporate sponsors might include companies such as Eversource and PosiGen (both in attendance at the workshop)
- Donor opportunities such as names in solar bricks/paving





www.landartgenerator.org

Community Charrette, Willimantic, Connecticut
March 3, 2017