



When the grid goes down, how will your community respond?



CLEAN WATER FUND

Introducing EASE: Education and Action for Secure Energy

- Community Briefing
- Planning Framework
- Participatory Workshop
- Peer Support Network

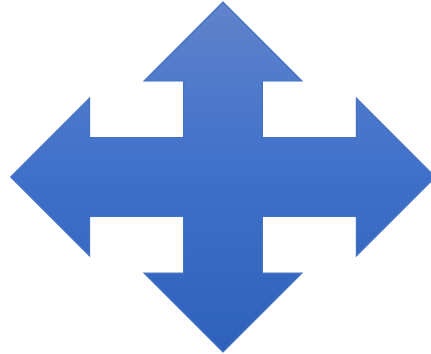


4 RELATED DRIVERS OF LOCAL ENERGY INNOVATION

EXPANSION OF
RENEWABLE ENERGY
IN THE COMMUNITY



EMERGENCY
PREPAREDNESS



ADVANCED ENERGY
MANAGEMENT FOR
EFFICIENCY AND
FINANCIAL RETURNS



ENERGY SECURITY/
SELF-RELIANCE



CLEAN WATER FUND

KEY INGREDIENTS – SIMPLE FORM

Cut waste to reduce demand	Storage [batteries, fuel cells]	Design and technology skill
Backup generation	Micro-grids	User capabilities and interactions
Efficient power sources [e.g. combined heat & power]	Renewable supply	Etc.

MORE ON MICROGRIDS

- CT MICRO-GRID funding VIA DEEP: \$20.5 M – 11 projects
15 mW distributed generation capacity
- Bridgeport – Hartford – Windham – Milford – Middletown – Woodbridge + universities
- Often gas, diesel, CHP, fuel cell
- Solar not yet easy to integrate, but can be done
- Serve critical facilities in emergency AND ongoing operations

DESIGNING FOR OUTCOMES

Primary goal	System Components	Comments
Least up-front cost	High-efficiency natural gas or propane generator	Behind single meter only
Lowest operating cost or Zero carbon emissions	PV + storage	Behind single meter only Suitable for short outages only
Low operating cost or Longer run times on available fuel	PV + storage + high efficiency standby generator	Behind single meter only Generator only runs when needed to charge batteries
Nearly continuous run times or Multiple meters and buildings	Microgrid, with or without some, or all, of the above	Can (and should) install as many of the above as possible as funds and technology allows while considering microgrid(s)



Financing strategy: start with goals and benefits

Reduce energy
costs

Reduce GHG
emissions

Increase energy
security and
reliability

Include public,
private end
users or both

Who can benefit? Who can contribute? What's the business model?

RUTLAND, VT – FIRST SOLAR & STORAGE MICROGRID

- ONLINE 2014
- FED-STATE-NGO-LOCAL FINANCING PARTNERSHIP
- ON A BROWNFIELD
- STORAGE HELPS STABILIZE THE GRID AS WELL AS PROVIDING EMERGENCY POWER



YOUR TEAM [minimum]

Facility manager	Legal advisor(s)	Local utility
Local emergency response personnel	TOGETHER EVERYONE ACHIEVES MORE	Non municipal micro-grid participants
Green Bank	ESCO/Developer	AND ???

Government **can't** do it all

SO WHO ELSE IS ON THE TEAM? Consider....

Gas stations	Food stores
Hardware stores	Health clubs w/ showers
Urgent care clinics	Neighborhood groups!



COMMUNITY PLANNING FRAMEWORK

“HEART AND SOUL” (Orton Family Foundation)

Phase 1 - Lay the Groundwork

Step 1: Get Organized

Step 2: Create a Work Plan

Step 3: Spread the Word

Phase 2 - Explore Your Community

Step 4: Gather and Share Stories

Step 5: Identify What matters Most

Phase 3 - Make Decisions

Step 6: Develop Options

Step 7: Make Choices

Step 8: Formalize Decisions

Phase 4 - Take Action

Step 9: Mobilize Resources

Step 10: Follow Through

Step 11: Cultivate Heart & Soul



Thank you!

Melissa Everett, Ph.D.

*CT Energy and Sustainability Program
Manager*

meverett@cleanwater.org

860-232-6232



CLEAN WATER **ACTION** | CLEAN WATER **FUND**