Block Island Energy Forum
October 22, 2011

Meeting Summary

Meeting Goals

- To build a shared understanding of the existing situation and potential options for the generation of electricity for Block Island, *if Deepwater does not go forward.*
- To elicit community input on the pros and cons of the options, and identify next steps for the Electric Utilities Task Group (EUTG) in developing a proposal for the town.

Meeting Agenda

9:30 Welcome, Introductions, and Overview of the Day

9:45 Identification of the Community's Priorities
- *Participants are asked: "What are most important criteria underlying any successful electricity program for Block Island?"*

10:30 Presentation of Options

12:00 Lunch

1:00 Review synthesis of criteria from morning

1:15 Record preferences, ideas, thoughts, concerns about Options
- *Participants identify top priority options, and offer comments, concerns, questions, etc for options by posting them on sticky notes.*

2:00 Small group discussion of options
- *Participants synthesize preferences, comments, and questions on each option in small groups, and determine any next step they would recommend on this option*

3:30 Break

3:45 Report Outs from small groups

4:30 Closing/Next Steps
- *Closing survey: please identify one action you think should be taken (if it becomes clear Deepwater is not going to happen).*

Identification of Community Priorities

Participants at each table were asked to brainstorm important criteria that should be taken into account when considering different energy options for Block Island. Each table was asked to report out their three most important criteria. These criteria were synthesized during the forum and are reproduced below (in no particular order).

Community Priorities
- Environment (impact on nature)

- Affordability: reduced electricity price
- Reduce impact on climate
- Supply meets demand (variability, etc.)
- Preserve natural beauty of the island
- Minimize capital costs
- Honor / maintain aesthetics (view-shed, seascapes, night sky)
- Maintain tourism
- Daily comfort: noise, quiet, unobtrusive
- Keep down local taxes
- Sustainable – environmentally, economically, socially (demographically)
- Compatible with future demands (communication, technology)
- Public interest
- Independence, local control & benefit
- Compatibility with island's economic structure
- Quality / reliability of delivery, infrastructure
- Feasibility
- Maintain real estate values

Presentation by the EUTG

The Electric Utility Task Group gave a presentation of 7 options for responding to the electricity needs for Block Island, consisting of:

- Option #1—Do Nothing
- Option #2—Stand-alone Cable
- Option #3—Wind
- Option #4—Solar
- Option #5—Conservation and Energy Efficiency Measures
- Option #6—Combination of Wind, Solar and Conservation/Efficiency
- Option #7—Nonprofit/Ratepayer Ownership

For each Option, the EUTG presented a brief description of the concept and an overview, an initial analysis of costs and benefits, and estimates of bottom line costs and savings. To the extent that certain information was not known or was in dispute, the Task Group named this and shared the range of estimates. Please see Appendix B for the presentation slides.

Comments from EUTG Presentation

Participants offered comments and questions about the information shared on the seven options, offered several additional options for consideration, questions that could not be answered during the forum.

Option #1—Do Nothing

- It was suggested to add "independence" to the benefit list.

- BIPCo's current owner commenting that this was not an acceptable option for BIPCo. Given this, a participant suggested adding "feasibility according to BIPCo's current owners" to the cost column.

Option #2—Stand-alone Cable

- A question was asked about the cost of maintaining the cable over time.
- A question was asked about the availability of Federal and/or State funding.
- Participants asked about the possibility of finding a less expensive next step, such as talking to National Grid.

Option #3—Wind

- Participants asked whether it had to be one large turbine or if it could be multiple smaller turbines. The Task Group clarified that it could be either.
- There was a request to remove "only" from the statement in the presentation that wind was the "only" realistic large scale alternative generation option.
- Participants asked (and raised concerns) about necessary turbine heights.
- A question arose about a possible fuel cell addition to the turbine.
- Participants raised the following Costs: decreased tourism, and danger from lighting causing fire in turbines
- A question was asked about Helix-turbines.
- A request was made for the EUTG to clarify cost/benefit given different efficiencies/sizes of turbines.
- A brief economic discussion arose over the length of time to repay the capital costs (~9 years) and the estimated life-span of turbines (~20 years).
- A discussion arose over how to manage excess power that could come in low-use/high wind times. Mechanisms to manage this within the turbine(s) were included in the cost estimates.
- A question arose about the distribution of the savings. This would depend on how the option was structured, but could accrue to wind owner or to rate payers.
- A request was made for the EUTG to share the data that led to their estimated numbers. The Task Group agreed to do so.

Option #4—Solar

- A participant noted that zoning and historic district issues should also be listed as costs.
- It was suggested to add multiple sites and owners as a benefit as well as a cost.
- A participant asked whether the bottom line estimates included all Federal and State incentives.
- It was noted that PV costs were going down rapidly, and that the affordability and benefits of this option would likely change by the time a decision on the options is ready to be implemented.
- It was suggested to add social sustainability as a benefit.

Option #5—Conservation and Energy Efficiency Measures

- A participant asked whether BIPCo could just raise rates if less electricity was being used. The Task Group agreed that this was possible, but that, given fuel costs, total spending would still decrease.
- It was suggested that "becoming a green model" should be added as a benefit.
- Participants asked about State/federal grants for conservation, and suggested that BI push for these.
- A participant recommended developing a map of the potential for conservation.
- It was noted that some other electric utility companies offer conservation rebates, and suggested that BIPCo should offer such incentives.
- A participant suggested government tax incentives on an individual basis
- It was asked how the benefits of conservation would be distributed.

Option #6—Combination of Wind, Solar and Conservation/Efficiency

- It was suggested, and the Task Group agreed, that this option still needed to include a diesel base.
- It was noted that the economics of this option focused on municipal solar only, and suggested that it also include distributed solar.

Option #7—Nonprofit/Ratepayer Ownership

- A participant asked about the potential for Condemnation.
- It was suggested to add as a benefit the cost savings from not litigating rate increases.

Additional Options—Participants suggested several additional options for consideration:

- Gas Pipeline
- Hydro
- Co-generator
- Bio-fuel
- Letting BIPCo Act

Overall Comments

- Participants requested a Compare/contrast cost & savings per KWh for each option, showing different size/scale of the different options

Small Group Discussions about the Options

Community members wrote comments about individual options on "sticky-notes" and pasted these notes in areas designated for each option around the room. In addition, community members each received three colored dots to affix to their favored options (all three on 1 or divided among options, at their discretion). Comments posted for each option are reproduced in full in Appendix C.

Forum participants were then broken up into six groups, each of which was tasked with summarizing and synthesizing the individual comments that were made on six of the options

("Do Nothing" and "Additional Options" were not included in the synthesis process as they each received minimal comments). Each of the six groups publicly presented their synthesis of their option to all in attendance; these syntheses are reproduced below.

Option #2—Stand-alone Cable

- 42 "favorable" dots
- 28 comments (9 positive comments, 7 negative comments, plus neutrals/mixed).
- Concerns about affordability of the capital costs, loss of independence, and increases in consumption
- 5 had concerns about feasibility—would like to see a less expensive "next-step" study
- Some sentiment that cable would only be good if cost could be socialized across the state
- Cable would be of interest to some if was combined with renewables
- Another theme was environmental impact, both positive (Natural gas vs. Diesel) and negative (Concern for more usage, more impact than renewables).

Option #3—Wind

- 8 "favorable" dots
- 26 comments
- General opinion: 90% negative, 10% positive
- Next steps: new technology, smaller technology needs more study
    - Skepticism around technology that's being looked at today. Need to look at other wind options
- Breakdown of Comment Themes:
    - 9 aesthetics
    - 7 cost
    - 4 environment
    - 2 efficiency
    - 2 small/new tech
    - 1 solar better
    - 3 w/ cable
    - 3 complex
    - 5 just "NO"
    - 2 just ''YES"
- Relating to community priorities: (600KW)
    - Environment and aesthetics are key concerns
    - If this is off-shore, it's much more appropriate
    - Concern about feasibility due to complexity
    - Skepticism about affordability and cost
    - Concerns about reliability, quality, seasonality

Option #4—Solar

- 12 "favorable" dots
- 12 positive comments, 3 concerns

- Comments mostly focused on individual (distributed) solar installations
- Breakdown of Comment Themes/Issues:
    - 6 Concerns about funding—loan programs, grants, subsidies
    - 2 Concern about storing electricity and backup capacity
    - 2 Comments re: community-scale installation
    - 1 Cost benefit analysis compared to other renewables
    - 1 Support b/c it's distributed around the island
    - 1 Long term financial: home equity loans
    - 1 Can be installed with a minimum amount of viewshed impact
    - 1 Community scale requires land

Option #5—Conservation and Energy Efficiency Measures

- 5 "favorable" dots
- Several people wanted to see audits
- Several comment about rate structure
    - Pay more if you have renters
    - Pay more for non-commercial heavy uses (e.g. air conditioning, filters, etc)
- Education program
- Cable encourages conservation can you can sell power back
- Possible next steps: rate structure, audits, education programs

Option #6—Combination of Wind, Solar and Conservation/Efficiency

- 22 "favorable" dots
- 20 positive comments with themes, 2 general positive comments
- Public interest:
    - Individual and community benefit of incremental installations, personal commitment
    - It's seen as a compromise
    - Opening for community participation
    - Up to individuals to implement on their own
- Affordability
    - Incremental installation
    - Off-peak pricing for residential users
    - Wasteful use penalty
    - Expert leadership and planning
- Sustainability and conservation
    - Need a power plant baseline
    - Incremental installation
    - Bio-fuels
- Other Themes:
    - Beauty and aesthetics
    - Split on Cable/No Cable
    - Environment and climate were very present
    - Energy independence

Option #7—Nonprofit/Ratepayer Ownership

- 14 “favorable” dots
- 9 favorable comments
- Favorable Comments
    - Implementation needs work
    - In the public interest
    - Ratepayer control of goals and operations
    - Promotes independence
    - Eliminates profit incentives
- Across positive comments, it was suggested that it is important to do regardless of generation source
- (4) Negative comments:
    - Don’t possess the operational skills or the human resources support in the town
    - Professional evaluation of BIPCo
    - Experienced negotiator needed
- Key items:
    - Management (implementation of process)
    - Evaluation of company (price & environment)
    - Do regardless of other generation sources (self-determination)
- Key questions:
    - Timing
    - Clarifying timing of ownership (define and educate)
    - Loss of independence (measure)

Comments from Closing Survey

Participants received index cards and were asked to write and submit a “closing comment” with a suggested next step that the EUTG should explore, an opinion about one of the energy options, or any other final thoughts. These closing comments are summarized below and are reproduced in full in Appendix D.

Steps Moving Forward

More Analysis – Of 38 respondents 7 requested some kind of further study and data collection. Proposals ranges from a comprehensive, non-biased, feasibility study of BI and possible energy source to a cry for information that would put to rest once and for all the “wishful thinking” that a cable was feasible.

Missing Voices – Six respondents were concerned about the composition of the people at the table. These respondents wanted to see a greater involvement of young community members, greater web-presence and to take the issue to the ballot.

State/Town Support **–** Two participants expressed concern that the state and local political leadership were not involved in the process and that without them all the discussion could be

mute. A third wanted to see the town take decisive action to get the process moving – give up on Deepwater or move on it, because the BI electricity situation is in crisis.

Restatement of Positions

Pro-Cable – Seven respondents emphasized their support for the cable idea. For some this was a second choice assuming the Deepwater project would not happen, for others it was the only option.

Cooperative Ownership – Six respondents commented on the importance of Cooperative ownership of BIPCo. Nearly all of these comments also included a desire for alternative energy sources as well. One respondent questioned whether BIPCo would be a good purchase at all.

Small Scale Solar/Wind – Three respondents mentioned small scale solar or wind as a good option (without mentioning the cooperative ownership). One of these suggested that the group push to ease zoning time and difficulty for solar and wind as this would encourage individuals to take action.

Comments about the Process

Process **–** Five respondents commented on the process. All were grateful and felt that their time had been well spent. One participant wished that the afternoon session had been done in the morning because people would have been fresher.

Appendix A

Energy Forum Participants

Mary E. Anderson
Al Angelbeck
Sam Bird
Dean Brown
Socha Cohen
Margie Comings
Bill Comings
Michael Delia
Maggie Delia
Nancy Dodge
Nancy Doolittle
Jorgen Emsbo
Kim Gaffett
Cheryle Gagnon
Pam Gasner
Nancy Greenaway
Herman Hassinger
Connie Hogan
Kevin Hoyt
Rosemarie Ives
Bruce Johnson
Sandra Kelly
Tim Kochler
Ken Lacoste
Kay Lewis
David Lewis
Peggy Lewis
Barbara MacMullan
Ken Maxwell
C.R. McGinnes
William McKernan
George Mellor
Bill Penn
Sven Risom
Steve Robison
Nancy Robison
Everett Shorey
Gordon Smith
Frankie Smith
John Spier
Pat Tengwall
Betsy Theve
Arlene Tunney
Christopher Warfel
Jane Weidman
Dan West
Tina Wileikis
Bill Wilson
Bryan Wilson
Bennet Wohl
Toube Wohl

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Agenda

9:30	Welcome, Introductions, and Overview of the Day
9:45	Identification of the Community's Priorities
10:30	Presentation of Options
11:15	*Break*
11:30	Continue Presentation of Options
12:00	*Lunch*
1:00	Review synthesis of criteria from morning
1:15	Record preferences, ideas, thoughts, concerns about Options
2:00	Small group discussion of options
3:30	*Break*
3:45	Report Outs from small groups
4:30	Next Steps/Closing

Discussion Guidelines

- Stay on task – Please avoid tangents
- Share the floor – Please be concise in your comments and speak one at a time
- Be respectful to each other – Please no personal attacks
- Be engaged – Please share your thoughts
- Be constructive – Please seek to integrate your concerns and the concerns of others

Identification of Community Priorities

What are the most important criteria/considerations underlying any successful electricity program for Block Island?

Community Priorities

Environment (impact on nature)	Affordability: reduced electricity price
Reduce Impact on Climate	Supply meet demand (variability, etc)
Preserve natural beauty of the island	Minimize capital costs
Honor/ maintain aesthetics (view-shed, seascapes, night sky)	Maintain tourism
Daily comfort: Noise, quiet - unobtrusive	Keep down local taxes
Sustainable – environmentally, economically, socially (demographically)	Compatible with future demands (communication, technology)

EUTG Options

1. Do Nothing
2. Stand-alone Cable
3. Wind
4. Solar
5. Conservation
6. Combination of Wind, Solar, and Conservation
7. Nonprofit/Ratepayer Ownership

Changes to Electricity System Under All Scenarios

- Removal of Underground Fuel Storage Tanks
- Upgrade Distribution System
- Rate Design Study to Ensure Rates Promote Investment in Conservation and Allocate Costs Fairly

Option #1: Do Nothing

Diesel Generator

Option #1: Do Nothing

Concept: BIPCo continues generating electricity using diesel generators

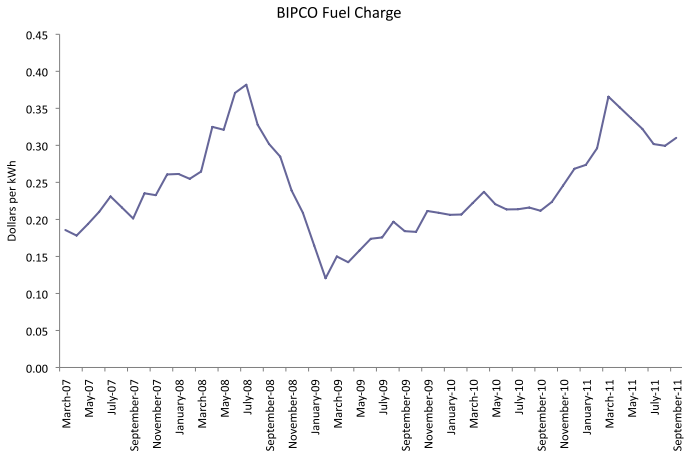
Overview:

- Continuation of status quo
- Would require continuing investment in generation equipment
- Would require meeting stricter emission standards in 2013

Option #1 Pros and Cons

Benefits/Opportunities	Costs/Risks
• No up front capital investment required	Fuel costs are extremely high - Sept. 2011 were $.30 per kWh or approximately $3 million per year
	Fuel costs are highly variable and expected to increase: past range $.12 to $.38 per kWh over the last three years
	Costs of stricter emission controls

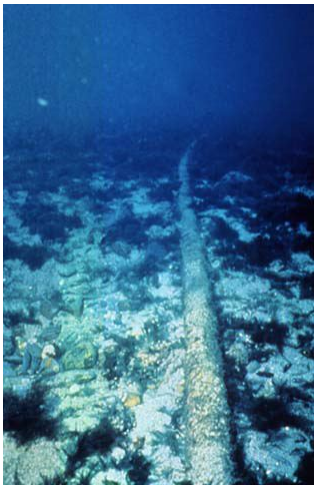
Option #1 Do Nothing



Option #1 Bottom Line

- **Estimated costs:**
  - $60 million for fuel over 20 years at current rates
- **Estimated savings:**
  - NONE

Option #2: Stand-Alone Undersea Cable



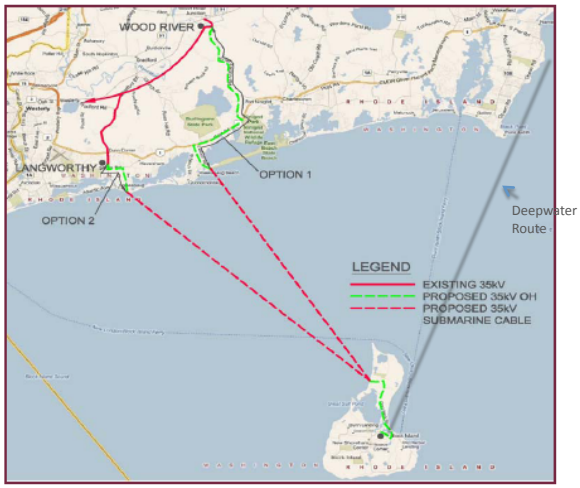


Image courtesy of HDR Study (2007)

Option #2: Stand-Alone Undersea Cable

Concept: Replace BIPCo diesel generation with power purchased from the mainland

Overview

- Mainland power costs cheaper than BIPCo diesel costs
- Economics of proposal depends upon uncertain cost of cable installation

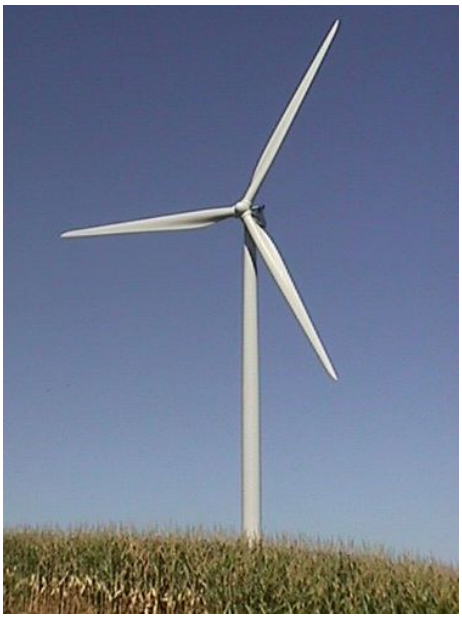
Option #2 Pros and Cons

Benefits/Opportunities	Costs/Risks
Estimated annual fuel cost savings of ~10-20 cents per kWh ($ 1to $2 million for all ratepayers)	Future savings depend on escalation rates for diesel fuel relative to mainland power (mostly natural gas)
Stabilizes costs – mainland power can be purchased at relatively stable rates versus oil prices	Cable installation costs are high and uncertain → range from $20 million to over $40 million
Reduces carbon and other emissions – mainland power includes renewable	Risk of power purchasing

Option #2 Bottom Line

- **Estimated costs:**
  - $20-40 million or more
  - Annual costs $1.2 to $2.4 million
- **Estimated savings:**
  - Current estimate ~10-20 cents per kWh
  - $1 to $2 million per year for all ratepayers
- **Next Steps:**
  - Feasibility study: $100s of thousands

Option #3: On-shore Wind



Option #3: On-shore Wind

Concept:

- Erect 600 kW wind turbine on-island
- Sell power to BIPCo

Overview:

- Would require upfront investment in wind turbine
- Would require an acceptable site
- Would reduce fuel purchased by BIPCo
- Higher output in winter

Option #3 Pros and Cons

Benefits/Opportunities	Costs/Risks
Estimated savings of ~$350,000 to $450,000/year	Estimated cost of construction on Block Island ~$2.8 million
Only realistic large scale alternative generation option at this time	Turbine issues: noise, appearance, flicker, bird/bat concerns
Provides some stability to fuel costs since wind power costs remain fixed for life of project	Finding a site acceptable to the community
Reduces carbon and other emissions	

Option #3 Bottom Line

- **Estimated costs:**
  - $2.8 million initial investment
  - $170,000 per year
- **Estimated savings:**
  - Energy costs of ~$350,000 to $450,000 per year
- **Next Steps:**
  - Feasibility study: $75,000

Option #4: Municipal and/or Private Solar Panels

Option #4: Municipal and/or Private Solar Panels

Concept:

- Install distributed photovoltaic systems (PV)
- Excess power is sold to BIPCo

Overview:

- Would require upfront investment in solar panels
- Would require acceptable sites
- Reduces fuel purchased by BIPCo
- Higher output in summer

Option #4 Pros and Cons

Benefits/Opportunities	Costs/Risks
Current PV technology ~18 cents per kWh	High initial costs per kWh generated
Clean, relatively unobtrusive power	Multiple sites and owners
Provides more output during summer when load is higher	Some concerns about aesthetics
Provides some stability to fuel costs since solar power costs remain fixed for life of project	Economics become questionable if cable is installed

Option #4 Bottom Line

- **Estimated costs:**
  - Capital Costs of Solar Systems - ~$18 K per house (2 kW)
- **Estimated savings:**
  - $.02 to $.12 per kWh
- **Next Steps:**
  - Community finance and outreach program

Option #5: Conservation and Energy-Efficiency Measures

Option #5: Conservation and Energy-Efficiency Measures

Concept: Initiate electricity efficiency and conservation measures for all ratepayers

Overview:

- Higher electricity rates yield higher savings from conservation and efficiency measure
- Costs and savings variable as per technology and usage
- Ratepayers make individual conservation investments and reduce electricity consumption
- Comprehensive program to induce investment and reduce consumption

Option #5 Pros and Cons

Benefits/Opportunities	Costs/Risks
Reduces electricity consumption and saves money as a stand-alone measure or in coordination with any other scenario	Capital and labor costs of lighting, appliances, HVAC, and weatherization upgrading and installation
Reduces carbon and other emissions	Some measures rely on user education and awareness
	Limited savings if stand-alone
	Savings believed to be small in

Option #5 Bottom Line

- **Estimated costs:**
  - Highly individual and hard to generalize
- **Estimated savings:**
  - Highly individual and hard to generalize
- **Next Steps:**
  - Community finance and outreach program

Option #6: Combination of Wind, Solar, and Conservation

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Concept: Combine most viable and cost-effective elements of onshore wind, solar, and electric efficiency/conservation proposals

Overview:

- Need to consider separate elements of onshore wind, solar, and efficiency measures
- Combining all three provides maximum savings

Option #6 Pros and Cons

Benefits/Opportunities	Costs/Risks
In combination, these three measures can reduce cost at lower investment than a stand-alone cable (even at lowest estimated cost)	Substantial upfront investment
Reduces carbon and other emissions	Complex implementation
Provides some stability to fuel costs since wind and solar power costs remain fixed for life of project	More complex generation system to manage

Option #6 Bottom Line

- **Estimated costs:** $3.85 million
  - Capital Costs of Wind Turbine - ~$2.8 million
  - Capital Costs of Solar Systems - ~$500 K
  - Capital and Labor costs of conservation upgrades - $550 K

- **Estimated savings:** $540 – 640K per year
  - Wind: $350K - $450K/year
  - Solar: ~$40K
  - Conservation: ~$150 K

Option #7: Nonprofit/Ratepayer Ownership

Option #7: Nonprofit/Ratepayer Ownership

Concept: Continue to explore nonprofit or cooperative ratepayer ownership for cost-savings and better alignment of incentives for owners and ratepayers of BIPCo

Overview:

- Reduce costs through nonprofit ownership and through long term investment decisions
- Facilitate implementation of other Options through control of BIPCo

Option #7 Pros and Cons

Benefits/Opportunities	Costs/Risks
Immediately lower BIPCo costs (3-4 cents per kWh) • Eliminate profits, income taxes and some management compensation	Acquisition cost of BIPCo relative to savings • Current owners have been unwilling to sell at an acceptable price
Reduces future costs through investments focused towards ratepayer benefit	Need to add management and supervision
Creates an implementation structure for other options	Some opposition to community ownership

Option #7 Bottom Line

- **Estimated costs:**
  - An acquisition offer of $1.8 million was made in 2008 to the current owners which was turned down
    - Annual cost of $180,000 - $.01/kWh
- **Estimated savings:**
  - Reduction in operating costs of $.03-.04/kWh
- **Next Step:**
  - Resume Discussions

Community Priorities

in no particular order

Environment (impact on nature)	Affordability: reduced electricity price
Reduce Impact on Climate	Supply meet demand (variability, etc)
Preserve natural beauty of the island	Minimize capital costs
Honor/ maintain aesthetics (view-shed, seascapes, night sky)	Maintain tourism
Daily comfort: Noise, quiet - unobtrusive	Keep down local taxes
Sustainable – environmentally, economically, socially (demographically)	Compatible with future demands (communication, technology)

Preferences and Comments

3 DOTS – to indicate preference

Sticky Notes – to write comments, questions, ideas, concerns

POST ON SHEETS FOR THE APPROPRIATE OPTION

Small Group Discussions

- Select a moderator/reporter for your group
- Read through all the sticky notes about your option
- Synthesize the comments/questions on the sticky notes, and identify:
  - any general sense of opinions about the option (if there is one)
  - the level of agreement or disagreement in the community about the option
  - any next step they would recommend on this option

Closing Survey

On a card, please write one action you think should be taken *(if it becomes clear Deepwater is not going to happen*)

Appendix C

Full Text of Participant Written Comments posted onto Options

#1 Do Nothing

- May be end result and have a cable put in by deep water then can put up small scale wind energy and solar and benefit from net metering
- We do a lot of "nothing" here
- With no cable – design a smart grid system/net metering system/that includes 40% diesel generation
- This is what we've been doing and look where it has gotten us! (NO)

2 Stand-alone Cable

- I support a cable in conjunction with option 6
- P.U.C. assistance would be helpful (sharing the cost)
- Have the town government formally ask the P.U.C. to open a cable/infrastructure docket (Socialize)
- Cable only if Public/non-profit ownership of power utility so that purchase of power distributed can be negotiation chosen and in the best interest of the ratepayer and ongoing operation of electrical utility. We could become a producer too! (Case 6 without other ownership of BIPCo)
- Re-grounding Cable Option: EUTG to look beyond self-financing opportunities to explore the true nature of cost socialization, what do FERC transmission rulings allow? What will RI P.U.C. allow? How did Nantucket fund its cable? Need to make the economic business case that BI is important to the economic health of the state as a revenue center and job generator back to state. Make the case for socialization of cost. Hire a consultant to develop the numbers. Personal income tax returns to state, corporate tax, sales tax, hotel tax state-wide multiplier of wages paid locally. Make the case that the state can't afford to let the BI community go bust as a revenue source. Every thinks the politics up state won't allow. Get smarter than they are and make the case to have the agenda. (Socialize cost of cable)
- BI threatens to withhold its taxes until the state chips in to pay for the cable
- No cable (NO)
- Cable is second option after wind, solar: only if reasonable moneywise
- Cost requires either huge outlay by island ratepayers or cost distributed to others who will reap no benefit. Neither seems acceptable.
- Over and over again, the various groups have shown the cost of a stand-alone cable would be more, by far, than the combo of wind/solar and conservation.
- I'm less enthused about this option because it feeds the appetite for unlimited consumption year-round modest users pay the infrastructure costs for air conditioning, lawn sprinkling etc.
- Absolutely not! – BI should be independent, should live within its electrical resource means. [The proposal] is not economically reasonable. BI should become an energy

model without buying energy from other places and transferring environmental problems. (No cable)

- We need to do a study that gets our own financial numbers and facts about whether the cable can go to Charlestown. Deepwater's #s were referred to in the PowerPoint.
- Any reduction in usage of BIPCo will result in an increase in the rates for all the other users because fixed costs must be allocated over a smaller base.
- Need to determine viable route- (landfall on mainland); and National Grid charges on mainland side in order to price out the cable realistically.
- The feasibility of implementing the stand-alone cable option (mainland landing point, acceptable environmental impact, and whatever other issues are involved) should be determined before spending six figure sums to determine the cost. Time to bring "on-line" should also be conservatively estimated.
- Take next steps on feasibility study
- Task group needs to expand, enlist island expertise, with, say a budget of $10-20K, determine feasibility and cost of a cable installation and to examine probability of socialization etc. (Want inexpensive feasibility study)
- A stand-alone cable would require much more study – it is possible that this would be best but no one knows yet.
- <u>No</u> stand-alone cable. Not economically wise for island, feasibility questionable. (NO)
- We need a cable now! (YES)
- Cable, Cable, Cable <u>First</u> (YES)
- A cable can provide a base source of energy to the island at rates determined by the cost of natural gas, a very plentiful source of energy. (YES)
- Must have the cable! It can be combined with any other option.
- Let's join the world with a cable! No more slow clocks – fix infrastructure – (distribution system)
- Offers a balance of baseline power for all. Offers opportunity to patch into green energy. Un-obtrusive. Can absorb on-island wind and solar excess.
- Cable (alone) is great, but remember: we still would need a back up (diesel?)
- Grid is mandatory!
- Note: Morning comment about futuristic generation of hydrogen with surplus power from renewable sources out of phase with demand and generation with fuel cells on later demand suggests further question – can coast guard be designated to fly in spare generating equipment (or bring by boat equipment at a port) for energy relief to enhance reliability?

#3 Wind

- Wind seems economically feasible and aesthetically acceptable to most. It becomes even more feasible in event of a cable.
- Good option but will meet with local resistance. Perhaps compensation needs to be given to those effected.
- On shore wind is good and opponents should travel to the Portsmouth Abby to see it. Then check the Internet for pros and cons by users in communities that have them.

- My conclusion based on the assumptions: I would like to have my electric bill reduced. This town wind turbine will not do this; in fact it will increase my bills. The Town will be paying off the wind turbine for 9 years, a long period of time in which a cable to the mainland, offshore energy generation or future technologies would make the turbine extinct.
- Q: which is more difficult to approve (by zoning) small solar or small wind? (Alt)
- No turbines over 60 feet
- Turbine towers/tips/tops limited to 60 feet
- No windmills closer to BI than 12 miles limit. Really don't want any windmills at all. 1) Bad for foghorn noise 2) see lights from shore of BI 3) Fog horns 4) dangerous for airplanes looking for hole in fog to find landing field.
- Would need several land based turbines OR numerous see based turbines – <u>but</u> in open water 10 miles off shore at least
- Little output of electricity at high cost
- Must be augmented by cable or diesel generator – too heavily government subsidized
- Wind by itself is not the answer – a) siting is almost impossible b) winter/summer demand is out of sync c) noise, view, etc are intrinsically a problem
- Cost – rate of individual ratepayers will not decrease unless Town specifies savings will be returned to stakeholders.
- Need analysis based on current technologies
- Wind energy – many negatives – such as very expensive, noisy siting problems, viewsheds, 600Kw out of scale with the height of the island.
- Large turbines ruin viewshed, seascapes, have bright lights at night ruining our dark skies, and making noise, flicker. Kills birds and bats.
- Large industrial wind turbines are not consistent with the look, feel and beauty of this island. It will <u>destroy forever</u> the sense of place of the island. Not just the physical beauty but the people who are a diverse population that makes up this community. No large wind turbines.
- Wind visually is not a problem. Noise is a bigger negative.
- Wind would be the worst option. It's ugly.
- Will ruin B.I. have you seen the movie "wind fall"? It shows what will happen.
- B.I. Is nature – windmills are not – noisy, spinning, rusting, blinking with lights – NO!
- NO! – Hell no! Noisy, light polluting, Flicker problems, UGLY!!!
- <u>NO</u> on large land turbines
- Please no wind farm
- Wind turbines, on or off shore will bring harm to the ambiance of B.I.
- Tourism is not a wind trade-off

#4 Solar

- Solar – go for it.
- Distributed solar is more desirable. Utility scale solar will require excessive land area.
- Ask state government to include block island in the new funding for 500kw solar projects

- Promote solar power by offering incentives, discounts on taxes etc. Can be done immediately, not 5+ years from now like some of the other options. Doesn't bother neighbors as other options might.
- Terrific! Give all year round residents a grant to install solar.
- More solar options for individual and town use obvious start.
- Produces output when island need it during the summer.
- Solar power community project that benefits all
- Excellent but can be done on an individual basis - by each homeowner or business. Needs a reliable back up.
- Solar may be possibility, if cheaper energy storage system became available.
- Solar great but worried about cost/benefit compared to other renewable options
- If we put solar panes mostly on south-facing slopes of roofs that will impact fewer viewsheds: homes at higher elevations will look over, not at, their neighbor's at lower elevation. T or F?
- Encourage individual systems and possibly commercial project.
- It is possible – not easy – But possible for us to have a community based solar project that would benefit all island residents as well as impacting global warming. This has been done and has been successful and would preserve the look/feel and beauty of our island.
- The planning board of the EUTG should develop a financial program allowing for home equity loans which go with the property to help home owners install solar.

5 Conservation

- Conservation includes maintaining natural beauty of the island, peace and quiet
- In addition to promoting conservation, there needs to be a plan to charge more for excessive use – especially air conditioning. Perhaps this could be achieved by off peak pricing. I very much support reducing consumption but this is difficult to achieve with visitors. How to promote "green" thinking with the people whose demand constantly drives up the need for more infrastructure?
- This is unrealistic – renters won't conserve
- Get actual facts from electricity users. BIG, marinas, spring house, and manissees
- Will be good augmenting option if a cable, any cable is in place. Should be done in any case at whatever level individuals and businesses can afford.
- No matter what, conservation and efficiency must be employed.
- Yes. A must do. Encourages independence. Needs to incorporate a new rate structure.
- More investigation into specific conservation measures is needed. Even though BIRA did not get a good response, energy audits, etc. can be useful.
- Have a small location in town – not at town hall – that houses a "conservation team" for educating the island on what is possible regarding conservation for a few months during the busy season. Folks don't know about the BIRA energy audits – or it hasn't been made as available as it needs to be for busy island folks and businesses.
- Need co-op ownership to work

- Conservation – requires reduction of output. Efficiency – maintains output with less input. Cons./effic. Has much better chance of happening with BIPCo cooperatively owner.

#6 Combination of Wind, Solar and Conservation

- Should include the cable
- This option should include cable
- I strongly support number 6 because it divides the pro's and con's over more than one technology
- A combination should emphasize individual wind, solar etc. investment. Small incremental installations would be economically feasible
- Viability rests with existence of cable, also
- Complicated Systems – manpower needed and expertise to operate and maintain
- I like this idea because it is the "best of all possible worlds" – the best and most appropriate energy sources can be used in different parts of the island. Not every options works in all places on the island. This allows for maintaining viewshed, no impact on neighbors, feasibility of planning (some things now, wind later on).
- I also am concerned over the possible significant loss of beautiful viewsheds if we go with too many mills.
- I like to start with conservation measures first: they are relatively easy and create the least amount of confrontation
- In addition to mixed alternative generation, include redevelopment/upgrade of diesel generation to meet most stringent emissions standards available (I.E. Tier 4/interim tier 4). Also include in redevelopment/upgrade plan, institution of use of biofuel. Clean up site currently used for power production.
- Take the best of each to deliver the most effective and efficient delivery
- Critical opportunity for community participation and fulfillment of all community concerns.
- We need off-peak pricing as part of the mix. There needs to be a premium charged for air conditioning and other out size impacts.
- Include a well-designed, funded study to build a 30% diesel/gas – 30% wind – 30% solar 10% other/back up with Diesel – no cable!
- Solar that benefits individuals not just the town.
- No Cable – No turbine over 60 feet
- Definitely support a diversity of sources. #6 is a compromise position: desirable yes, but is compromise achievable?
- Distributed generation and a renewable mix – wind, solar, hydro, wave, trash conversion. May pose lower risk, and be more acceptable to the overall community because it limits the NIMBY argument.
- Would be good if baseline energy provided by utility to service those who cannot afford expensive energy options
- Allows BI to be independent – lets us use environmentally friendly resources. Encourages ratepayers to live within a resource budget i.e. there are not invisible bottom-less resource

- Not concerned about visual impacts of solar or wind
- Town needs to come together as a group to clearly identify goals of each options 1) cable 2) wind 3) solar 4) update existing infrastructure
- The combo alternative can easily be combined with a cable to the mainland with benefits of net metering going directly to the homeowner.

7 Nonprofit/Ratepayer Ownership

- Have an investment bank perform 20-year valuation on BIPCo that includes infrastructure/net-metering/socialized cable/cash flow- EBITDA, new management, brown field clean up etc.
- Need to conduct a full financial analysis on current assets and evaluation: what is the value?
- Use professional, experienced, negotiators for dealing with BIPCo.
- #7 may be very divisive, on ideological grounds that will <u>not</u> yield compromise. Assuming professional managers are hired from "away," housing and living wages will be needed.
- Think your energies are more productive elsewhere
- We can't operate anything we have now. Why add more non-functioning, non-maintained things?
- The profit motive encourages one to put forth their best effort – also – good management makes things work well – too many 'holes' in this idea
- All upside benefits to cooperative ownership – no brainer for upgrading infrastructure
- Support this policy regardless of what other initiatives are chosen. If the power company receives an infrastructure upgrade & continues to be used privately we will be having this forum again in 30 years, <u>my lifetime</u>.
- I do not know how we can really discuss all the energy options without this –
- Cooperative ownership of the electric utility should be the #1 priority of the island community regardless of the solution to the future sources of electricity. Continued private ownership is misaligned with almost all of the community's priorities.
- A must do!
- Non-profit/ratepayer ownership makes sense – should be explored further.
- Rate payer co-op promotes independence, eliminates profit incentive, only goal it to provide electricity and many can prioritize how
- Will provide better control of long-term decisions: e.g. producing small grid technology, placing distribution system (or partial) underground. Ratepayers can impose a tiered rate structure on themselves to encourage conservation. Ratepayers can manage system independent of profit
- Good idea because it is more likely to serve the public interest
- This option has been studied <u>and works</u> – the issue is just hard to implement – needs more work

Additional Options

- Hydrokinetic energy – U.S. is investing research dollars. Should be aware of future potential feasibility

- Small-scale turbines seem most promising. Individual PV solar should be pursued
- Hydro should be considered as part of combination/efficiency option. Gas pipeline – NO! Transfers the environmental degradation to a remote location -> not good. Not a renewable resource.

Appendix D

Full Text of Participant Written Comments from Closing Survey

Steps Moving Forward

More Analysis

- Helped illuminate the wishful thinking that we can get a socialized cable. Many proponents seem to think this is feasible. I don't see how. Let's put this to rest. Then get to work on conservations/sustainable options/and getting BIPCo in line with the public interest.
- The TC & UTAG should look at other energy sources besides windmills. Cost of energy must go down now and solar would be one of the first options to study. (look out for new sources of energy)
- It is clear to me that there are still more questions than answers. I would like to see a graph constructed that compares cost & equipment for each renewable energy. (Number of mills/panels; cost per K.W. – across wind, solar, gas line, etc.)
- More inexpensive evaluation of costs attendant to a stand-alone cable. Get task force people to work on each aspect of the problem.
- Great community discussion! We need to commit the time and cost to doing a thorough cost benefit and environmental analysis of the two most popular options.
- Pursue funding for and complete the on-island wind turbine(s) feasibility study so we know: technical feasibility, cost benefit, best island location.
- The town should fund a feasibility study (by a non-biased group) that is done from the ground of being that there is no particular agenda for wind solar or cable. It should be done looking at that natural characteristics of the island and the economics of the island and the state of renewable energy now and going into the future – not based on the past – The outcome would be finding solutions that are a match for Block Island's unique circumstances and resources - rather than a reaction to a corporate endeavor/strategy (deep water). Our best interest needs to be addressed – not trying to fit our concerns into deep water's financial/corporate concerns. Solar cannot be ignored given the steep degrease in solar panels.

Missing Voices

- Recognize that the group here today is not representative of the island's year round residents, and the age-demographic is heavily weighted towards the 65+ group = suggest you visit the fire/rescue, town hall staff, school staff for another group of opinions.
- The EUTG has been a great asset to the town and the taxpayers. However it is time to move the discussion out of a public meeting operated by a few volunteers and allow the tax payers as a whole to make some of these decisions at, for example, a town financial meeting. This process has broad implications for the future and a vote of the people is required to move forward expeditiously.

- Elected officials on BI
- Get something on a ballet
- Take this forum on the road to younger stakeholders
- Put on Website

State/Town Support

- Much covered; many positive comments both covering good and bad aspects – positive comments in that the criticisms were constructive. I certainly hope that our town council will pay attention to the wishes of the people rather than "go their own way" as they did with the zoning chair of the transfer station area.
- We – the citizens of Block Island – need to demand more help from out state of federal representatives. In all our discussions today, no one mentioned that the solutions we seek needs their support.
- Town needs to decide when it will give up on or let go of deep water. How long will the town wait? Electricity situation in island has been in crisis for more then three years. Town needs to articulate how today's work will be used and on what timeline… not have this be another study on the shelf!!!

Restatement of Position

Pro-Cable

- If "deep water" doesn't happen put in a power cable from the mainland to BI!!
- Good day well spent. Task group should make available the calculation used in generating the cost and operating numbers for different options. Also the group should consider the options given at the session. Cable is best and only option!
- One action if no deep water: find a way to get a cable either by supporting BIPCo or co-op power company and subsidize town owned cable or force P.U.C. to share cost with rest of grid.
- GET A CALBE!
- We don't want to screw up our visual experience, it would affect tourism, property values and the environment. The cable is the only benign source of energy. How to pay for the issue we cannot afford to not do it.
- I was quite stunned at the huge positive vote for Cable!! To me, it sounds like the most balanced way to proceed. I am definitely opposed to the deep water wind "deal", made with the state government.
- No windmills; get rid of deep water co. Have town bargain for cable as town can bargain for price, grants, etc.

Coop Ownership (w/ Alternatives?)

- 1) Work on the solar/wind/conservation/no cable option 2) this can probably only be done if the power Co. rate/payer Co-op -> non-profit owned
- Block Island should seize the opportunity to become an exemplar of how a community should deal with energy issues. Our burdens: antique grid, profit motivated utility,

seasonality, tourism dependence are also opportunities. Priorities: Coop ownership of BIPCo. – heavy incorporation of alternatives – address issue of climate change.

- To: UTAG – need to assess other technologies – small wind technologies – include diesel into the mix – ratepayers' ownership of the power company is different than an energy option. This is a mandate – need professional negotiators and hard facts (I am not sure that BIPCo is such a great deal). – need to also include storage of the energy (water, hydrogen, etc)
- Ownership of BIPCo needs to change!
- We should put our efforts towards transfer of BIPCo to ratepayer control. 1) The actual organization to handle this unclear 2) The infrastructure needs attention – which is not happening under BIPCo 3) this is independent of new energy sources (including deep water).

Small Scale Solar/Wind

- If "deep water" does not happen the town and community should look at zoning and siting and planning regulations/adherences. If there is no "huge" solution, make it easier for homeowners and business owners to take action. – Ease siting restrictions on small-scale wind and solar installations. – work on these things now regardless of the outcomes of the "deep water" proposal. – Individual homeowners will need to practice compromise; give up a bit of their viewshed so their neighbors can save on their energy cost and continue to afford to live here and continue to keep this community economically viable.
- Our environment is of greatest concern. Lets use our natural forces: solar and wind – it's a moral decision.
- If clear water is not going to happen I hope that BI explores more fully solar energy and also smaller sources of wind use

Comments about the Process

- What I learned today was that 1) community participation and 2) thorough professional planning are both critical to a solution that works for everyone with no one left out.
- Loved the public process – thank you for providing this forum today. Let's do it again with more information from feasibility (next step options). Again, make the forum come together again for input on those facts as well as on public will to explore new energy options. – thank you
- We have been motivated to think of possibilities even outside the box. The morning session was the better of the two. Afternoon session would have been better in the AM when we were fresher.
- There are enough ideas out there to solve our problem (although we should be open to future developments) so that it's a matter of agreement, acceptance and respect for the efforts to find solutions.
- Felt heard, Thanks for having this
- Better communication from EUTG