TO: TOWN COUNCIL

FROM: ELECTRIC UTILITY TASK GROUP

SUBJECT: UPDATE TO ANALYSIS OF COSTS AND BENEFITS OF DWW BLOCK ISLAND PROJECT

DATE: OCT. 21, 2013

As requested by the Town Council we have re-evaluated the economics of the DWW Block Island project and updated the analysis presented in our Dec. 18, 2012 memo to the Town Council. We have updated electricity costs to reflect fiscal year 2012 costs and consumption. We have updated the assumptions related to purchase power costs based on an analysis done by the Vermont Public Power Supply Authority. Finally, we have reviewed the potential savings from using LNG as a fuel source for BIPCO.

The results of our analysis remain the same: the DWW project, and the cable associated with it, will reduce overall electricity costs by 40 percent. Annual savings will be approximately $2.2 million.

Summary of Current Costs

For fiscal year 2012, fuel costs averaged 32 cents per kWh, compared to average fuel costs of 25 cents/kWh a 25% increase. Overall electric costs were 54.2 cents/kWh compared to 47.6 cents/kWh in 2011. This represents an increase of 14%. Electricity costs on Block Island continue to rise at a significant rate, driven by the cost of diesel fuel. These results are summarized in the table below.

Table 1: Summary of Electricity Costs by Customer Class

			Fiscal Year 2012 Cents/kWh		
Class	Customers	kWh	Fuel	non-fuel	Total
Residential	1,392	4,038,398	31.9	22.9	54.8
Commercial "G"	328	1,394,181	31.9	22.9	54.8
Commercial "D"	101	3,959,103	31.5	22.6	54.1
Public	32	888,066	32.5	18.2	50.7
Total	1,843	10,279,748	31.8	22.4	54.2

Notes: Taken from BIPCO Annual Report (FERC Form 1) for Fiscal Year Ending May 31, 2012

Public includes streetlights.

Savings from DWW Block Island Project

We have also updated the estimated savings from the DWW Block Island Project based on the fiscal year 2012 cost data and on the projected purchase power costs obtained from the Vermont Public Power Supply Authority (VPPSA). Town consultant Richard LaCapra contacted VPPSA, which conducted an analysis of what the cost of servicing BIPCO's load from the NE ISO would have been in 2012. (This report has been provided to the Council separately.) Mr. LaCapra then adjusted the VPPSA cost to reflect delivery to Block Island.

The VPPSA analysis results in a price remarkably close (and somewhat lower than) the National Grid Standard Offer price for industrial customers the EUTG has been using as a proxy for the purchased power cost. In our December 2012 memo to the council we used a standard offer price of 7 cents/kWh. The VPPSA analysis has an estimated cost of 5.7 cents/kWh, which when adjusted for losses at the mainland transmission level, losses through the cable and losses through the BIPCO distribution system, comes to 6.74 cents/kWh. In our Dec. 2012 analysis we used a cable charge of 1.5 cents/kWh. Mr. LaCapra assumes a cable charge of 3 cents/kWh and we have used that estimate in this analysis. Mr. LaCapra has chosen to use a conservative cable cost estimate; if the allocation formula outlined in the legislation wer used, Mr. LaCapra's estimate would be equivalent to the cable charge used in the EUTG Dec. 2012 analysis.

Based on these updated BIPCO and purchase power costs, the estimated electricity costs with the DWW project are 32.1 cents/kWh, compared to existing costs of 54.2 cents/kWh, a 40 percent reduction. Given sales of 10,279,748 kWh, this translates into aggregate annual savings of $2.3 million.

These costs are summarized in the table below.

Table 2: Projected Reduction in Block Island Electricity Costs with DWW

	FY 2012 Actual	With DWW	Savings
Non-Fuel Cost	22.4	22.4	0
Fuel Cost	31.8	6.7	25.1
Cable Cost	0	3.0	-3
Total	54.2	32.1	22.1

Savings from Use of LNG

The Town Council has asked the EUTG to estimate the potential savings from BIPCO's proposal to use a mix of liquefied natural gas and diesel. In July 2013, BIPCO and representatives from Clear Energy LLC made a presentation to the EUTG in which they proposed a 50/50 blend of LNG and diesel to be burned in the existing BIPCO generators. Clear Energy estimated that savings would be in the range of $300,000 to $500,000 annually, or 25 to 30 percent. Clear Energy proposed to cover the cost of the conversion equipment, with a 3 year contract with a minimum purchase of 50,000 MMBTU annually. The EUTG asked Clear Energy and BIPCO to provide the underlying assumptions used to develop these estimates, but they refused to do so citing the information as proprietary. Therefore the EUTG was unable to evaluate whether those estimates were reasonable. Subsequently, BIPCO has informed the EUTG that they do not intend to pursue a strategy of blended fuels in their existing engines, but rather are considering the purchase of a new engine that will run solely on LNG. BIPCO as yet has no information on the costs or potential savings for this scenario; therefore we are unable to provide an analysis of the impact on electricity costs.

Michael Beauregard, in a letter to the Town Council, used the initial Clear Energy estimate of savings from a 50/50 blend of fuel and extrapolates to estimate the savings that would occur if BIPCO switched **entirely** to LNG. While Mr. Beauregard's calculations may be mathematically correct, it is important to keep in mind that BIPCO is not contemplating such a scenario and has provided no information on the costs or savings of such a scenario.