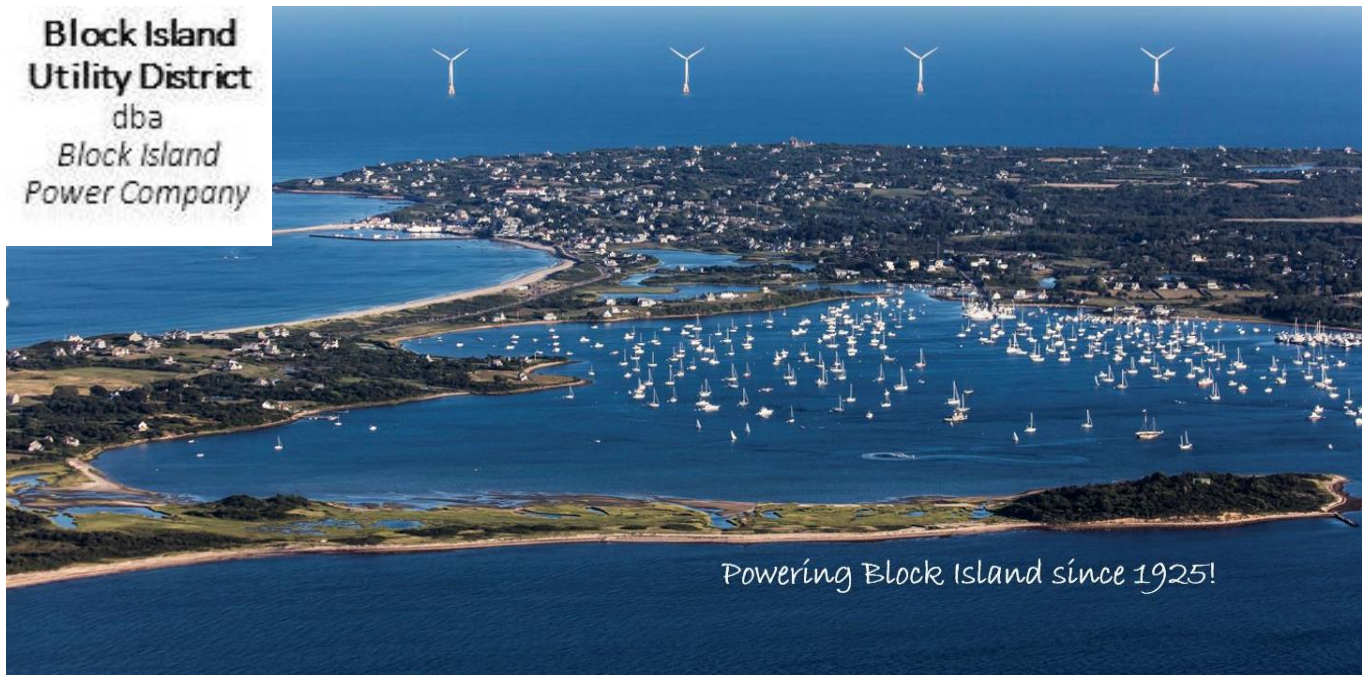


**Block Island
Utility District**
dba
*Block Island
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Powering Block Island since 1925!

Demand Side Management

2020 Plan

Docket #:

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Table of Contents

1. Introduction and Background	3
2. DSM Categories, Proposed Budget Allocation, Cost Recovery, and Estimated Benefits	5
A. Proposed 2020 Budget Allocations.....	6
B. Cost Recovery and Other Funding Sources	7
3. Detailed Program Descriptions	8
A. Residential Offerings:	8
i. Home Energy Assessments.....	8
ii. Direct Install Measures	9
iii. Weatherization Measures.....	10
iv. HVAC Measures.....	11
B. Business Offerings:.....	13
i. Business Energy Assessments	14
ii. Direct Install and Other Lighting Measures.....	15
iii. Weatherization Measures.....	15
iv. Business HVAC Measures.....	16
4. Program Administration and Management	18
i. Vendor Engagement.....	18
ii. Program Management and Oversight	18
iii. Customer Engagement	19
iv. Program Reporting.....	20
5. Conclusion	20

Block Island Utility District – 2020 Demand Side Management Plan

1. Introduction and Background

Demand side management (DSM) is important because it can provide benefits to both customers as well as the electric grid. The Block Island Utility District (BIUD, the District) is proposing to establish a DSM program to provide its 1,900 customers access to energy efficiency programs that will benefit them and improve the service and reliability of the island's electric grid. A DSM program provides access and incentives for measures that allow customers to optimize their energy usage and reduce their utility bills. Reducing energy usage, particularly during peak seasons or times of day, can also have substantial benefits such as reduced grid maintenance and capital expenditures, reduced peak charges for customers, and greater service reliability.

Block Island is a unique community because of its geographic separation from the mainland and its variable, tourist-driven seasonal usage profile. The community of New Shoreham and the grid that serves it needs to be flexible enough to handle the increased summer population, as well as reliable and resilient enough to provide service to the year-round residents and businesses, even in the face of harsh winter conditions.

Given Block Island's unique size, location, and seasonal usage spike, demand management is especially important for this community and aligns with many of BIUD's goals outlined in the proposed rate case filing (Docket #4975). Specifically, through the implementation of this proposed DSM plan, BIUD aims to empower its customers to make choices that help control their energy usage, reduce energy burden¹ on customers, improve resource allocation, and encourage the adoption of innovative new technologies that maximize the benefits of Block Island's smart meters. By supporting the filing of this proposed DSM plan, the BIUD Board seeks to deliver energy efficiency program benefits to all BIUD customers.

The proposed 2020 DSM plan for the Block Island Utility District represents an evolution of prior energy efficiency work conducted in New Shoreham through the *Block Island Saves* pilot program. The *Block Island Saves* program ran from 2015-2017 and was administered and funded solely by the Rhode Island Office of Energy Resources. The BIUD, working in collaboration with the Office of Energy Resources (OER), drafted this proposed DSM plan as a robust iteration on the original *Block Island Saves* pilot. The DSM programs described below leverage best practices from the *Block Island Saves* program as well as Rhode Island's nation-leading mainland efficiency programming and are intended to address the unique needs of the Block Island community.

The original *Block Island Saves* program began as a pre-pilot program with the support of the New Shoreham Town Council, fully managed and funded through OER. The pre-pilot was

¹ Energy burden is the percentage of household income spent on home energy bills.

conducted to test energy efficiency programs on Block Island and recruit a small group of pre-pilot participants. Of the 24 pre-pilot applications received, ten residents and five businesses were selected to participate in the pre-pilot (those not selected were later able to participate in the full pilot).

Pre-pilot participants received a free energy assessment of their home or business, followed by a list of recommendations for energy efficiency improvements and access to associated rebates or incentives. Overall, the pre-pilot program incentives and rebates were evaluated by OER to be cost-effective and successful in motivating participants to install energy-efficient measures. The success of the pre-pilot in terms of participation, interest, opportunities, and cost-effectiveness prompted the expansion of the pre-pilot program to a full-scale pilot.

Program offerings in the full pilot were identical to the pre-pilot phase. During the full-pilot phase, 110 additional home and business energy assessments were conducted. Program participants were able to save 313 MWh of electricity, 271 MMBtu of oil, and 136 MMBtu of propane annually. Participants were also able to decrease their energy bills, saving in aggregate \$597,968 (residential) and \$714,396 (business) over the lifetime of the efficiency upgrades.

Following the completion of *Block Island Saves*, OER conveyed lessons learned to both the BIUD Utility and the public through a report which is available on the OER website². This proposed 2020 DSM plan incorporates recommendations from OER's report and continues several elements from the successful *Block Island Saves* program, such as the no-cost assessments with direct install measures and incentives for weatherization. Based on the interest and adoption of those measures during the pilot the following proposed DSM programs include those same elements as a foundation for 2020. The proposed plan also seeks to prepare New Shoreham residents for the changing energy landscape by promoting the installation of newer, highly efficient heat pump equipment, programmable thermostats, and weatherization measures.

A significant difference between the proposed 2020 plan and the pilot is the expansion and enhancement of the HVAC and water heating programs. The proposed DSM plan includes an incentive for the adoption of high-efficiency heat pump systems as well as heat pump water heaters. In combination with the newly proposed rate structure (described below in section 2.B), the District feels that the adoption of heat pumps for heating and cooling needs will be an attractive option for customers that provides significant energy and cost savings.

Heat pump technology is an important tool in helping BIUD smooth out the current load curve, minimize increasing summer demand caused by a growing number of air conditioning installations, and can provide opportunities for customers to reduce their overall energy burden. In addition to aligning with the District's goals for its customers, offering incentives for heat pumps can also help Rhode Island to meet its Greenhouse Gas Emission goals while ensuring that New Shoreham residents and businesses receive the same, if not enhanced, opportunities for improved comfort and energy savings as other Rhode Islanders.

² <http://www.energy.ri.gov/documents/archived-reports/Block%20Island%20Saves%20Pilot%20-%20Full%20Report%20-%20April%202018.pdf>

Block Island Utility District respectfully requests that the Public Utilities Commission (PUC) approve this 2020 Demand Side Management plan and its associated use of ratepayer funds, in its entirety, as outlined below.

2. DSM Categories, Proposed Budget Allocation, Cost Recovery, and Estimated Benefits

The proposed budget for the Block Island DSM programs is broken into three major categories – Assessment and Installation, Inspection and Program Administration, and Customer Outreach.

In the Assessments & Installation category, there are programs for Residential energy assessments and weatherization; Residential HVAC and water heating; Business energy assessments, lighting, and weatherization; and Business HVAC and water heating. The distinction between Residential and Business programs will allow BIUD to track the distribution of costs and benefits within and between the two distinct customer segments. This budget category, overall, contains the full costs of energy assessments at homes and businesses, including the direct installation of measures such as LED lightbulbs, smart power strips, and low-flow showerheads, as well as rebates for additional measures such as weatherization and efficient HVAC equipment. As a result, the bulk of the proposed DSM budget exists within this category.

The Inspection and Program Administration category includes the cost of inspections for any residential weatherization and/or HVAC measures installed through the DSM programs, as well as any business direct install measures, weatherization, or other energy efficiency measures installed through the programs. It is important to verify the proper installation of deeper measures so customers will reap the full benefits of the measure. Further, to support insightful reporting to the Public Utilities Commission, inspection and verification is expected to enhance the accuracy of energy savings calculations, in addition to ensuring customer satisfaction and realization of expected energy savings. Since the District is re-establishing efficiency programming with this proposed DSM plan, start-up costs are perhaps higher than they may be in subsequent years. Coupled with the high cost of travel to/from Block Island, this has led to increased costs in this budget category relative to more mature DSM programs or more readily accessible areas. The District is committed to working with vendors and other partners to find ways to drive these costs down as much as is feasible in future program years, through more efficiency program delivery, engaging more local service providers, or other ways that may present themselves as the programs mature.

Funds for the efficiency consultant BIUD proposes to hire are also encompassed in the Inspection and Program Administration budget category. The efficiency consultant will assist the District in administering the DSM programs, managing the tracking and reporting of data, processing incentive rebates, and making suggestions for future program development. Additionally, the efficiency consultant will assist the District in developing a cost-effectiveness framework and evaluating program performance, consistent with Docket # 4600 principles and directives.

Lastly, the Customer Outreach budget category covers the costs of promoting the DSM programs. The proposed spending on program outreach will encourage BIUD customers to participate in the DSM programs, and will inform them on, how to participate and what benefits can be expected.

Using the *Block Island Saves* results, the average BIUD customer saved 2.84 MWh of electricity, 2.46 MMBtu of oil, and 1.24 MMBtu of propane annually through that program. Based on the estimated participation numbers for the proposed 2020 DSM plan, the District estimates that this plan could deliver approximate annual savings of 115 MWh of electricity, 100 MMBtu of oil, and 50 MMBtu of propane. Actual savings numbers depend on the exact measures installed by customers and the specific fuel types they utilize, among other factors, but this provides some scope as to the significant energy benefits BIUD customers can realize through this plan.

A. Proposed 2020 Budget Allocations

The budget numbers included below are based on actual project costs and participation levels from the *Block Island Saves* pilot program. Adjustments to those numbers are based on anticipated participation numbers and changes in unit costs since 2017 when the pilot concluded.

Table 2.1 Proposed 2020 DSM Plan Budget Allocations

<u>Budget Category</u>	<u>Proposed Budget</u>	<u>Notes</u>
<i>Assessment & Installation</i>		
Residential Assessments and Weatherization	\$45,350.00	Energy Assessments & Weatherization
Residential HVAC & Water Heating	\$7,700.00	Programmable Thermostats; Heat Pump Water Heaters; Heat Pump Heating & Cooling Systems; Weatherization Bonus
Business Assessments, Lighting, and Weatherization	\$27,600.00	Energy Assessments, Lighting Measures, and Weatherization
Business HVAC & Water Heating	\$5,000.00	Programmable Thermostats; Heat Pump Water Heaters; Heat Pump Heating & Cooling Systems
Total	\$85,550.00	
<i>Inspection and Program Administration</i>		
Inspection Services		Inspections for Residential Weatherization; Business Direct Install measures, Lighting, and Weatherization
Program Administration		Efficiency Consultant Services
Total	\$29,200.00	
<i>Customer Outreach</i>		
Total	\$5,250.00	Advertising in Local Publications, Bill Inserts, Online, and in Community Bulletin
Total Budget	\$120,000.00	

B. Cost Recovery and Other Funding Sources

Block Island Utility District, through its new rate case in Docket # 4975, has proposed a new rate design with implications for the demand side management plan and its budget. The current rate structure is a two-tier structure with peak and off-peak seasonal rates for all customer classes. In its proposed rate case, BIUD has suggested implementing a three-tier rate structure with peak, shoulder, and off-peak rates for all customer classes as well as an efficiency surcharge.

OFF-PEAK					PEAK				OFF-PEAK		
JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEPT	OCT	NOV	DEC

OFF-PEAK				SHOULDER		PEAK		SHOULDER		OFF-PEAK	
JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEPT	OCT	NOV	DEC
				\$.00395/kWh		\$.01/kWh		\$.00395/kWh			
				EFFICIENCY SURCHARGE							

Through the proposed rate redesign, BIUD estimates it will generate approximate revenues of \$60,000 from the efficiency surcharge during the calendar year, which will support DSM program implementation in 2020. The breakdown of efficiency surcharge collection was provided in Docket # 4975 and estimates collections as follows: ~\$24,000 from residential customers, ~\$6,000 from business customers, and ~\$30,000 from the general service rate, which comprises larger residential users as well as some business customers. The Office of Energy Resources will supplement the budget for the DSM programs with Regional Greenhouse Gas Initiative (RGGI) proceeds. OER has committed a total of \$180,000 in RGGI proceeds to be provided over the course of three years, beginning in 2020, to help support BIUD’s DSM programming in conjunction with annual, collected efficiency surcharge monies.

3. Detailed Program Descriptions

A. Residential Offerings:

Refer to Table 2.1 for full program budget; residential subsection reproduced below.

Program	Proposed Budget	Estimated Quantities & Notes
Residential Assessments and Weatherization	\$45,350.00	36 Energy Assessments & 8 Weatherization
Residential HVAC	\$7,700.00	36 Programmable Thermostats; 6 Heat Pump Water Heaters; 6 Heat Pump Heating & Cooling Systems; 2 Weatherization Bonus

i. Home Energy Assessments

Residential energy assessments with no-cost direct install measures are critical for households to reduce energy use, lower their energy costs, and identify opportunities for additional, deeper savings. The home energy assessment is a focal point of the proposed DSM plan as it allows for

the comprehensive evaluation of the residential building stock, direct installation of energy saving measures (e.g. LED light bulbs, smart power strips) and the opportunity to identify deeper savings opportunities such as weatherization or HVAC equipment upgrades. Assessments often serve as the initial contact point for customers and what the District hopes is the start of an ongoing, beneficial relationship with the customer as they become more aware of their energy use and seek to make continual energy improvements to their home.

Each home energy assessment, conducted by a BPI certified energy assessor, will include a whole-home evaluation, a blower door test to check for proper air sealing, a heating system safety test to check the health and safety of the equipment, and a number of direct install measures (outlined in the following section) that the assessor will install during the visit. At the conclusion of the assessment, the customer will receive a home energy action plan outlining additional energy savings measures they can implement, the estimated costs, and BIUD incentives associated with those measures, as well as information and tips on how to better manage their energy use and reduce costs. These comprehensive assessments are provided to the customer free of charge and are open to all residential BIUD customers.

ii. Direct Install Measures

As part of the Home Energy Assessments, each energy assessor will install a number of energy saving measures in each home, as needed, at no cost to the customer. The proposed 2020 DSM plan proposes the following direct install measures:

Measure	Estimated Quantities	Incentive Level	Notes
LED Lightbulbs	432	Free	No limit; expect 12 per assessment
Smart Power Strips	72	Free	Maximum of 2 per assessment
Low-Flow Shower Heads	36	Free	Expect 1 per assessment
Aerator faucets	50	Free	Expect 1.5 per assessment

LED Lightbulbs – installed in place of existing incandescent or CFL bulbs throughout the home, any number of bulbs can be replaced during the assessment.

Smart Power Strips – up to two (2) smart power strips that help reduce electricity usage of devices that would otherwise be constantly using electricity.

Faucets and Showerheads – Low-flow showerheads and aerator faucets that help reduce water and energy usage, any number can be installed throughout the home during the assessment.

These low-cost measures are proven energy saving devices that provide immediate benefits to customers who have a home energy assessment completed.

iii. Weatherization Measures

One of the outcomes BIUD expects to achieve with its proposed DSM program is to educate customers about the benefits of weatherization and to properly incentivize them to undertake these measures. Residential customers with weatherization opportunities will learn of these opportunities through the home energy action plan provided at the conclusion of the assessment, as well as given information about potential costs and incentive levels that BIUD offers.

Weatherization benefits include increased comfort to occupants year-round - warmer in the winter and cooler in the summer - as well as reduced energy usage and costs. Many homeowners deal with high energy bills year-round without realizing that proper weatherization techniques can meaningfully reduce their bills. The proposed DSM plan offers the following options as part of the weatherization program:

Measure	Incentive Level	Notes
Air Sealing	Up to 10 labor hours free (\$800 value) plus 40% off further sealing, up to \$2,000 in total weatherization costs	Based on pilot rebate levels and expected home energy assessment numbers
Duct Sealing		
Insulation		
Pipe Insulation		
Weatherization Bonus	\$250	For customers who insulate <u>and</u> install a heat pump system

Air Sealing – Sealing air leaks in and around windows and doors to reduce the loss of heated or conditioned air.

Duct Sealing – Sealing of leaks around ductwork to ensure that all heated or conditioned air enters the living spaces and is not lost in the walls/ceilings or to the outside.

Pipe Insulation – Improving insulation around water pipes to reduce heat loss and protect against pipe freezing during the winter months.

Insulation – Installing improved insulation in the walls, ceilings, and floors of the home to improve the building envelope, leading to increased comfort as heated or conditioned air remains in the home rather than escaping outside.

An additional feature for residential customers is a weatherization bonus. Customers can receive an additional \$250 rebate if they bundle insulation work alongside the installation of a heat pump heating and cooling system. BIUD is proposing to offer this bonus incentive because of the benefits that come from weatherizing a home properly, especially in conjunction with efficient operation of a heat pump system.

iv. HVAC Measures

The home energy action plan will also provide information to customers about opportunities to upgrade inefficient heating and cooling equipment in the home. The HVAC offerings aim to promote the adoption of high-efficiency heat pump systems for heating and cooling as well as heat pump water heaters. Electrifying heating and cooling is an important step in reducing greenhouse gas emissions and is supported by the District's recently proposed three-tier rate structure, which includes a lower winter electricity price that makes the adoption of electric heating measures more cost effective for customers. Additionally, the adoption of programmable thermostats gives residents the ability to better control and monitor their energy usage and save money.

It is proposed that incentives for the following equipment, at the following levels, be offered as part of the Residential HVAC program:

Table 3.4 – Proposed HVAC and Water Heater Measures and Incentives				
Equipment	Rating	Estimated Quantity	Proposed Rebate	Notes
Central Heat Pump	SEER ≥15; HSPF ≥9	2	\$250 per ton	Seasonal Energy Efficiency Rating (SEER) measures air conditioning and heat pump cooling efficiency. A SEER rating is a maximum efficiency rating, similar to the miles per gallon for a car. Heating Seasonal Performance Factor (HSPF) is used to measure the efficiency of heat pumps and the higher the HSPF the more efficient the system.
Ducted or Mixed Ducted Mini-Split Heat Pump	SEER ≥15; HSPF ≥9	2	\$250 per ton	
Ductless Mini-Split Heat Pump	SEER ≥15; HSPF ≥10	2	\$150 per ton	
Heat Pump Water Heaters	ENERGY STAR ≤ 55 gallon; should have a minimum UEF of 2.00	4	\$300 rebate	Uniform Energy Factor (UEF) is a new metric for determining the energy efficiency of a water heater utilized by the Department of Energy. The higher the UEF, the greater the equipment's efficiency and the lower the energy bill.
	ENERGY STAR >55 gallon should have a minimum UEF of 2.70	2	\$150 rebate	Uniform Energy Factor (UEF) is a new metric for determining the energy efficiency of a water heater utilized by the Department of Energy. The higher the UEF, the greater the equipment's efficiency and the lower the energy bill.
Programmable Thermostats		36	\$25 Rebate	
*Rebate not to exceed \$750 per customer for this program (excluding thermostats).				

Block Island Utility District wants to promote the adoption of high-efficiency electric heat pumps through an incentive structure that will be based on a per-ton amount. This structure is more flexible than a flat rate amount and allows the incentive to vary appropriately with the proper sizing of heat pump systems to various home configurations and sizes. Additionally, if the newly proposed three-tier rate structure with lower winter electric rates is approved by the Commission, BIUD anticipates that the combined new rate structure and DSM incentives will drive adoption of heat pump technologies which will save customers energy and money.

Qualifying units must meet the SEER and/or HSPF ratings specified for each system type, which align with the efficiency ratings contained in the Northeast Energy Efficiency Partnerships (NEEP) cold climate heat pump specification list and is considered the industry standard for this technology.

Alongside the incentive for heat pump based heating and cooling systems, the District also proposes incentives for heat pump water heaters. Given the smaller variation in equipment size, associated energy savings expected, and to align closely with other Rhode Island efficiency programs, BIUD will be offering flat rate incentives of \$300 and \$150 for heat pump water heaters, based on size. Units 55 gallons and smaller use less energy than larger units and thus provide a greater opportunity for energy savings. Therefore, BIUD proposes to provide a higher incentive for these units compared to units over 55 gallons in size. Qualifying units will have a minimum uniform energy factor (UEF) of 2.0 for the smaller units and a minimum UEF of 2.7 for the larger systems. ENERGY STAR heat pump water heaters can save the average household \$330 per year and 2,690 kwh compared to a standard electric hot water heater, so these units represent a great opportunity for savings.

Because heat pump technology is still new and because the pilot program on Block Island did not include heating and cooling heat pump systems as part of the incentive structure, the District is proposing to cap the incentive level at \$750 per customer for these measures initially. BIUD wants to strike a balance between providing a reasonable incentive to drive adoption of this technology alongside the ability to provide some incentive to a larger number of customers who may be interested in taking advantage of this opportunity. Because there is not reliable historical data from the pilot program for these measures, setting a cap will help the District to serve both of these goals.

The District will also incentivize programmable thermostats through the residential HVAC and water heater program. Programmable thermostats are a useful piece of technology to help manage a home's energy usage efficiently and conveniently. BIUD is proposing a \$25 rebate to customers who purchase a programmable thermostat.

Customers who install weatherization or HVAC measures will be given their rebate after work has been completed and inspected. BIUD will offer rebate forms to customers both online and in person at the BIUD office and will require customers to provide proper documentation from the contractor who performed the job, in the form of a receipt or work order. Customers submitting rebates for eligible thermostats need only provide a purchase receipt as proper documentation with their rebate form. If a customer has any problems or questions regarding a rebate form, their contractor may be able to help complete relevant fields, and customers can always reach out to BIUD staff for assistance during business hours.

B. Business Offerings:

Refer to Table 2.1 for full program budget; business subsection reproduced below.

Program	Proposed Budget	Notes
Business Assessments, Lighting, and Weatherization	\$27,600.00	Energy Assessments, Additional Lighting Measures, and Weatherization
Business HVAC & Water Heating	\$5,000.00	Programmable Thermostats; Heat Pump Water Heaters; Heat Pump Heating & Cooling Systems

i. Business Energy Assessments

As with the residential offerings, the initial no-cost energy assessment for business and commercial customers is a foundational focus of the proposed business DSM programs. Comprehensive evaluations of the commercial spaces of New Shoreham will be conducted by a qualified energy assessor who will also directly install measures that provide immediate savings and deliver a comprehensive energy action plan to the customer with recommendations for additional savings measures. Providing these free, no-obligation energy assessments also allows BIUD to establish an ongoing relationship with business customers as they pursue energy efficiency improvements.

Each business energy assessment, conducted by an energy assessor, will include a whole-business evaluation of the electrical equipment and thermal systems as well as directly installing screw-in LED lightbulbs, as appropriate. At the conclusion of the assessment, the customer will receive a business energy action plan outlining additional energy savings measures they can implement, the estimated costs, and BIUD incentives or rebates associated with those measures, as well as information and tips on how to better manage their energy use and reduce costs. These comprehensive assessments are provided to the customer free of charge and are open to all BIUD business customers.

Because the number of business participants in the *Block Island Saves* pilot was small, and the business community on the Island is limited, it makes accurately estimating demand for specific measures more challenging than the residential program. The District is estimating six business assessments will be conducted in the initial program year and that from those assessments' customers will pursue some additional deeper efficiency measures, be that additional lighting, weatherization, or HVAC upgrades. The District has set a budget that anticipates that half of the business customers will pursue additional measures of some kind.

ii. Direct Install and Other Lighting Measures

Measure	Estimated Quantities	Incentive Level	Notes
Screw-in LED Lightbulbs	60	Free	No limit; expect 10 per assessment
LED fixture upgrades	12	75% of costs covered	Expect an average of 2 per assessment
Lighting controls	6		Expect an average of 1 per assessment
Occupancy sensors	12		Expect an average of 2 per assessment

As part of the business energy assessments, each energy assessor will install screw-in LED lightbulbs in as many fixtures as needed throughout the property. BIUD recognizes that many business environments have different lighting needs from residential customers, and screw-in LED lightbulbs may not upgrade the entirety of the lighting for a given business, and therefore it is proposed that incentives for additional lighting measures be offered as well. Upgraded fixtures, lighting controls, and lighting sensors (such as occupancy sensors) will be listed on the energy action plan as an additional energy saving measure that customers can pursue, and approved equipment will be incentivized at 75% of total cost.

iii. Weatherization Measures

One of the outcomes BIUD expects to achieve with its proposed DSM plan is to educate customers about the benefits of weatherization and to properly incentivize them to undertake these measures. Business customers with weatherization opportunities will learn of these opportunities through the energy action plan provided at the conclusion of the energy assessment.

Weatherization benefits include increased comfort to occupants year-round - warmer in the winter and cooler in the summer - as well as reduced energy usage and costs. Many business owners deal with high energy bills year-round without realizing that proper weatherization techniques can meaningfully reduce their bills. The proposed DSM plan offers the following options as part of the business weatherization program:

Measure	Incentive Level	Notes
Air Sealing	Up to \$1,200 in free air sealing plus 40% off further sealing, up to \$4,200 in total weatherization costs or up to \$3,000 in insulation costs	Based on prior rebate levels and expected business energy assessment numbers
Duct Sealing		
Insulation		
Pipe Insulation		

Air Sealing – Sealing air leaks in and around windows and doors to reduce the loss of heated or conditioned air to the outside.

Duct Sealing – Sealing leaks around ductwork to ensure that all heated or conditioned air enters the living spaces and is not lost in the walls/ceilings or outside.

Pipe Insulation – Improving insulation around water pipes to reduce heat loss and protect against pipe freezing during the winter months.

Insulation – Installing improved insulation in the walls, ceilings, and floors of the home to improve the building envelope, leading to increased comfort as heated or conditioned air remains in the home rather than escaping outside.

iv. Business HVAC Measures

Business customers have more varied building uses and often utilize larger equipment to support their operations. In order to ensure that the business customers of BIUD have opportunities to upgrade to more efficient equipment where appropriate, incentives for the following measures are proposed:

Table 3.8 – Proposed Business HVAC and Water Heater Measures and Incentives			
Equipment	Rating	Proposed Rebate	Notes
Central Heat Pump	SEER ≥15; HSPF ≥9	\$250 per ton	Seasonal Energy Efficiency Rating (SEER) measures air conditioning and heat pump cooling efficiency. A SEER rating is a maximum efficiency rating, similar to the miles per gallon for a car. Heating Seasonal Performance Factor (HSPF) is used to measure the efficiency of heat pumps and the higher the HSPF the more efficient the system.
Ducted or Mixed Ducted Mini-Split Heat Pump	SEER ≥15; HSPF ≥9	\$250 per ton	
Ductless Mini-Split Heat Pump	SEER ≥15; HSPF ≥10	\$150 per ton	
Heat Pump Water Heaters	ENERGY STAR ≤ 55 gallon; should have a minimum UEF of 2.00	\$300 rebate	Uniform Energy Factor (UEF) is a new metric for determining the energy efficiency of a water heater utilized by the Department of Energy. The higher the UEF, the greater the equipment's efficiency and the lower the energy bill.
	ENERGY STAR >55 gallon should have a minimum UEF of 2.70	\$150 rebate	Uniform Energy Factor (UEF) is a new metric for determining the energy efficiency of a water heater utilized by the Department of Energy. The higher the UEF, the greater the equipment's efficiency and the lower the energy bill.
Programmable Thermostats		\$25 Rebate	
*Rebate not to exceed \$1000 per customer for this program (excluding thermostats).			

Programmable Thermostats – programmable thermostats allow for better control of, and reduced operating costs from, heating and cooling systems. Therefore, programmable thermostats help manage a business's energy usage efficiently and conveniently. BIUD is proposing a \$25 rebate to customers who purchase a programmable thermostat.

Heat Pump Heating and Cooling, and Heat Pump Water Heaters: As in the residential program, it is proposed to incentivize business adoption of high-efficiency heat pump systems for heating and cooling, as well as heat pump water heaters. The recently proposed three-tier rate structure with an attractive winter electricity price, if approved by the Commission, is expected to make the adoption of electric heating measures even more cost effective for customers. By offering the

incentives proposed above, BIUD aims to encourage the installation of the most efficient electric heating or cooling systems.

Customers who install weatherization, additional lighting, or HVAC measures will be given their rebate after work has been completed and inspected. BIUD will offer rebate forms to customers both online and in person at the BIUD office and will require customers to provide proper documentation from the contractor who performed the job, in the form of a receipt or work order. Customers submitting rebates for eligible thermostats need only provide a purchase receipt as proper documentation with their rebate form. If a customer has any problems or questions regarding a rebate form, their contractor may be able to help complete relevant fields, and customers can always reach out to BIUD staff for assistance during business hours.

4. Program Administration and Management

The proposed management structure has been designed to ensure successful program delivery and implementation, effective customer outreach, timely customer service and rebate processing, and insightful data collection and reporting. Specifically, to achieve these outcomes, the District proposes a strong on-going collaboration with the Office of Energy Resources and proposes to hire an efficiency consultant to help administer the program and conduct program reporting.

i. Vendor Engagement

One of the critical elements to the success of the proposed DSM plan is the engagement of knowledgeable and reliable vendors. BIUD will be soliciting one vendor to provide energy assessments, direct install services and, if desired by the customer, weatherization measures to residential and business customers. The District will also be seeking a separate vendor to provide post-installation inspections for business customers and all residential non-direct install (e.g. weatherization and HVAC) measures. BIUD proposes issuing two competitive RFPs to hire a lead energy assessment vendor and a lead inspection services vendor, respectively.

The scope of work for these vendors will be designed to require comprehensive scheduling, high-quality in-person services, and coordination with BIUD staff. Selected vendors will be responsible for delivering efficient and effective services to customers, ensuring proper deployment and installation of incentivized energy efficiency measures, processing invoices and rebates in a timely fashion, and creating insightful program data reports.

ii. Program Management and Oversight

The District, recognizing the importance of robust oversight, data reporting, and program administration, will ensure staff will be trained and knowledgeable about the proposed program offerings and rebate process in order to effectively work with vendors, consultants, and customers in the delivery of the proposed DSM plan. BIUD also proposes several means of securing additional resources to support its management and oversight of the proposed plan. For example, the District plans to continue its ongoing engagement with the Office of Energy

Resources (OER) in order to leverage lessons learned and best practices from *Block Island Saves* and will also tap into the diverse set of efficiency expertise that OER can provide. Additionally, the efficiency consultant BIUD proposes hiring will help manage the program and its implementation, including the processing of rebates, the collection of data, and reporting on program performance.

Block Island Utility District will make rebate forms, including a listing of measure eligibility requirements, available both in person and online for customers to access. Once customers complete and submit rebate applications – either by mail or via email - the District’s rebate processing vendor will review them for accuracy and eligibility. All eligible applications received and reviewed will then be processed for payment to the customer, funds permitting, and customers should expect to receive their rebate in four to six weeks.

BIUD recognizes the importance of scheduling efficiency for the cost-efficiency of the proposed programs, since vendor travel to and from Block Island creates additional expenses compared to mainland efficiency programs. In order to minimize vendor trips to the Island, BIUD and its vendor will maximize the number of opportunities (assessments, weatherization, HVAC installations, etc.) completed in a day. The RFP the District will use to procure vendors will be explicit about the importance of scheduling efficiency and will ask respondents to explicitly address this important cost-barrier.

In the event that there is overcollection of ratepayer funds that are not spent on DSM programs in a given year, BIUD will roll those funds over into the next year. The subsequent DSM plan will indicate the exact budget category or categories those funds will be allocated to. Every effort will be made through careful planning, oversight, and budget tracking to ensure that there are not budget overages in a given year. In the event that a budget overage becomes a possibility within a given year, the District will close specific program(s) prior to an overage until the following year when funds become available again. As the District’s DSM plan evolves, participation rates will help inform budget setting for future years to ensure funds are allocated as accurately as possible to meet customer demand.

iii. Customer Engagement

Table 4.1 – Proposed Customer Outreach Channels and Budget Allocation		
<u>Customer Outreach</u>		
Total	\$5,250.00	Outreach through Local Publications, Bill Inserts, Online, and Community Bulletin

While the *Block Island Saves* pilot program was very successful, it did conclude over two years prior to this proposed DSM plan. Therefore, BIUD will need to strategically engage customers in order to promote the return of efficiency programming to Block Island. In order to ensure customers are aware of the program and its offerings, as well as provide instructions on how to participate, BIUD will be promoting the DSM programs through the following channels:

1. Bill inserts will be included with customer bills at four different times during the year to advertise the DSM programs, provide information about how customers can participate, and highlight incentive opportunities.
2. BIUD will take out quarter page advertisements in the local publications for multiple weeks during both peak and off-peak seasons in order to reach as many customers as possible. These advertisements will provide information on the programs and have seasonal calls to action to encourage customer participation.
3. BIUD will also utilize several no-cost engagement channels, like the community bulletin and the District's Facebook page to spread the word about the DSM program to customers throughout the year.
4. Lastly, BIUD office staff will also be trained on the programs, available offerings, and ways customers can engage with energy efficiency in order to provide accurate information to customers coming into and/or calling the office with questions.
5. If other outreach opportunities arise, the District may pursue other channels of communication with customers if budget allows.

iv. Program Reporting

As was discussed in section 4.ii, *Program Management and Oversight*, BIUD proposes to hire an efficiency consultant to help oversee and manage the DSM programs. In addition to helping oversee the programs and assisting with the Plan's implementation, the efficiency consultant will assist the District with quarterly progress reports, which will help inform a mid-year and year-end report as well as provides guideposts for program performance throughout the year. The data that will be included in quarterly reports as well as the year-end report are as follows:

- Number of participants per sector (Residential vs. Business)
- Costs incurred to date and percent of budgeted spend (by budget category)
- Detailed accounting of what measures have been installed, both direct install and other measures incentivized by the DSM programs
- Number of rebates processed, by measure type
- Number of inspections completed out of number of inspections required, and associated costs.
- kWh and delivered fuel (oil, propane) savings, both annual and lifetime, resulting from the program
- Peak demand reduction resulting from the program
- Other data as required, or as deemed necessary by the District or the Commission

5. Conclusion

The Block Island Utility District believes that the proposed DSM plan describes and establishes an energy efficiency program that will provide considerable benefits to customers and the local grid throughout its implementation. There are significant energy savings opportunities in New

Shoreham, which will be clearly highlighted in a forthcoming market potential study being conducted for all of Rhode Island. While this market potential study is underway, this plan offers effective strategies to realize immediate energy savings on the Island. The plan provides opportunities for no-cost assessments and direct-install measures that all customers can access free of charge, as well as guidance and further incentives for deeper energy saving measures.

The proposed 2020 DSM plan iterates on the *Block Island Saves* pilot program to provide BIUD customers will access to a variety of energy saving measures. The Plan, if approved by the Commission, would provide heat pump incentives that are likely to help smooth New Shoreham's annual demand curve and enhance the benefits of BIUD's proposed new rate structure. Additionally, through weatherization, lighting controls, and programmable thermostat incentives, BIUD aims to drive additional customer investment in insulation and demand side management technologies.

In sum, this proposed DSM plan provides a strong foundation for efficiency programming on Block Island and is structured to deliver significant benefits to customers and the local grid.

Block Island Utility District respectfully requests that the Public Utilities Commission (PUC) approve this 2020 Demand Side Management plan, and its associated budgets, in their entirety. Specifically, the District requests that the PUC approve the following:

The proposed total budget amount and the budget categories contained therein.

The proposed program offerings.