

## Targeted Energy Efficiency and Demand Response Assessments for South Kingstown and Bonnet 42F1 NWA Opportunities

Please note that this document is for informational purposes only. Targeted Demand Response (DR) Assessments for the Bonnet 42F1 and South Kingstown NWA opportunities are provided by Paul Wassink of National Grid's Demand Response Program. Targeted Energy Efficiency (EE) Assessments for the Bonnet 42F1 and South Kingstown NWA opportunities are provided by National Grid's Energy Efficiency program managers in the Customer Energy Management (CEM) team. The assessments below were updated in November of 2021. Please do not circulate without permission.

### Bonnet 42F1 NWA Opportunity (Narragansett, RI)

#### **Overview**

The Bonnet 42F1 NWA opportunity reflects a system need of 1.2 megawatts (MW) load reduction and 5.0 megawatt-hours (MWh) energy reduction. This NWA opportunity has a planned implementation timeframe of 12 years from 2023 to 2034.

The DR estimate for this NWA opportunity has identified 0.9 MW of curtailable load in the NWA area with an annual cost of about \$238,589 and a total (12-year) cost of approximately \$2,863,068. This is only 74% of the NWA goal of 1.2 MW of load reduction. In addition to helping meet the NWA needs, these measures would also result in other system benefits (deferred transmission, deferred capacity, and DRIPE).

The EE estimate for this NWA opportunity has identified 3.45 kilowatts (kW) of total potential incremental load reduction in the NWA area with a total (12-year) incremental cost of approximately \$79,200 (additional total incentives of \$31,200 with annual marketing costs of \$4,000 over twelve years). In addition to helping meet the NWA needs, these measures would also result in other system benefits associated with standard energy efficiency program measures per Docket 4600.

Together, the DR and EE estimates represent approximately 0.9 MW of load reduction and an estimated total (12-year) cost of approximately \$2,942,268. This contrasts with a distribution deferral value of \$474,068 and an estimated Approximate Value of \$1,190,000. Note that the Approximate Value for NWA opportunities includes the deferral value and any additional benefit value that is preliminarily applicable.

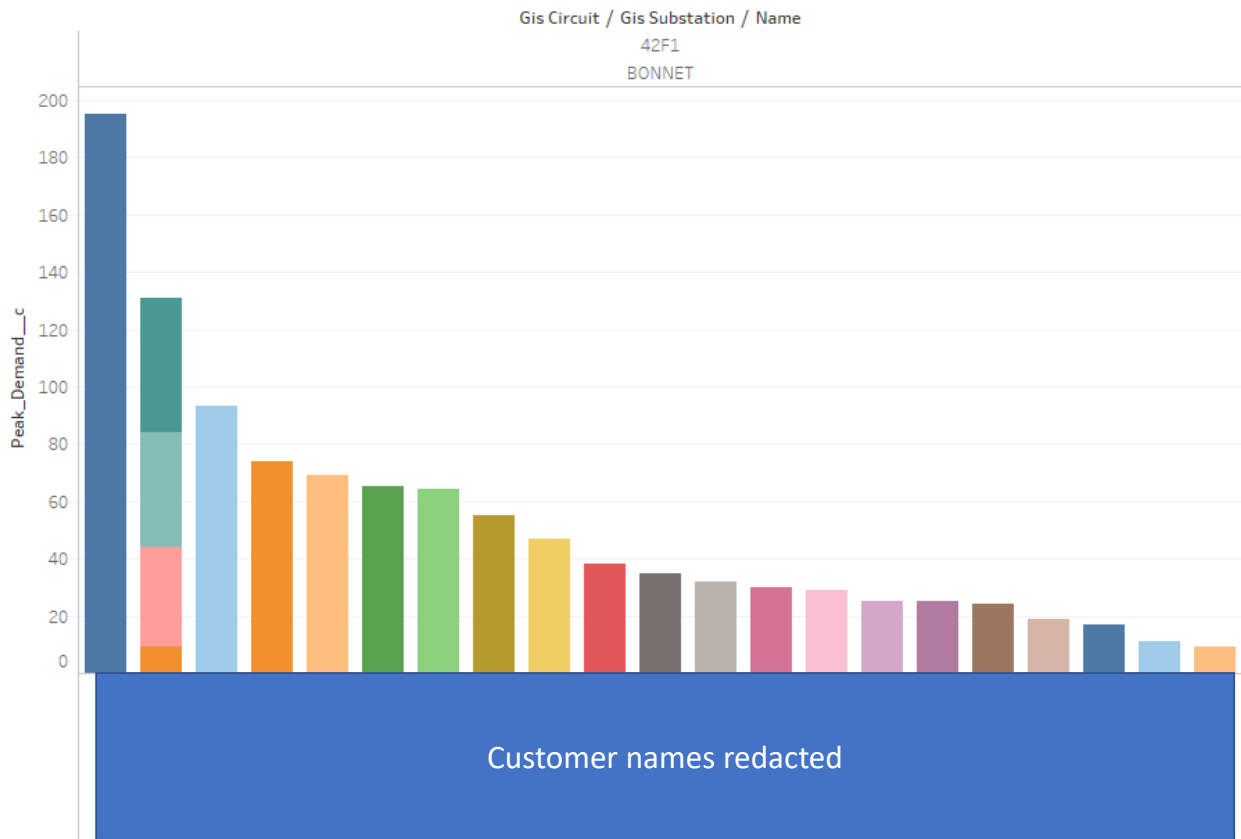
The energy efficiency and demand response measure assessments do not appear to effectively address the NWA need or to complement other portfolio solutions within the parameters of the opportunity requirements and economics.

**Demand Response Measures Assessment**

**Commercial & Industrial Customer (C&I) Demand Response – Targeted Dispatch (TD)**

There are 2 large C&I accounts on the Bonnet Substation feeder F1 with an annual peak load larger than 100kW. Please see the chart and table below for a breakdown of the largest C&I customer loads on the feeder. Note that second customer from the left has 4 accounts, though all accounts fall under the same specific C&I customer.

Figure 1. Large C&I Customer Load Demand Breakdown



Sum of Peak\_Demand\_\_c for each Name broken down by Gis Circuit and Gis Substation. Color shows details about Service Account Number. The data is filtered on minimum of Peak\_Demand\_\_c, which ranges from 1 to 195. The view is filtered on Gis Substation and Gis Circuit. The Gis Substation filter keeps BONNET. The Gis Circuit filter keeps 42F1.

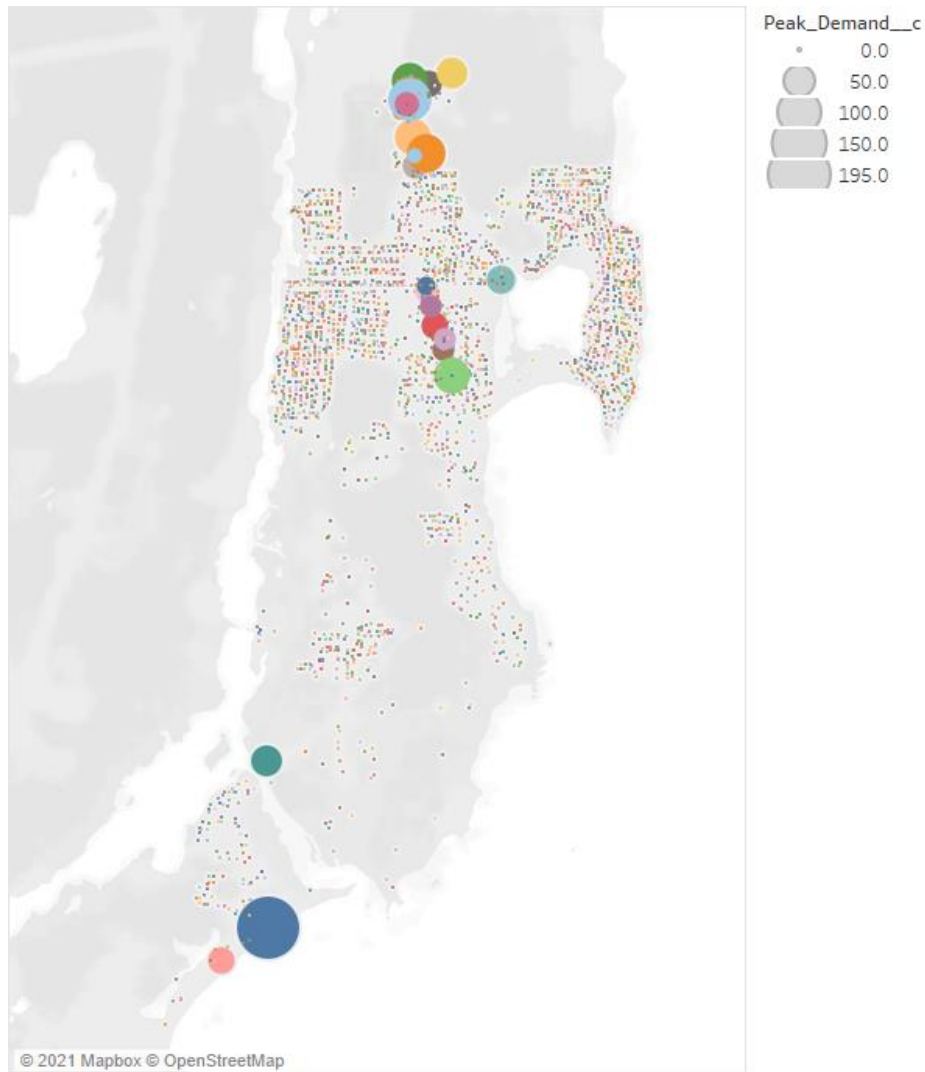
Table 1. Large C&I Customer Load Demand Breakdown, Table

Gis Substat..	Gis Circuit	Name	Service Acc..	
BONNET	42F1	Customer names and account numbers redacted	003	35.0
			002	17.0
			001	38.0
			007	11.0
			016	30.0
			000	69.0
			011	74.0
			009	195.0
			001	55.0
			023	9.0
			4	25.0
			005	19.0
			017	25.0
			007	32.0
			010	29.0
			001	93.0
			018	24.0
			5	47.0
			001	47.0
		008	40.0	
		009	35.0	
		005	9.0	
		008	64.0	
		026	65.0	

Sum of Peak\_Demand\_\_c broken down by Gis Substation, Gis Circuit, Name and Service Account Number. The data is filtered on minimum of Peak\_Demand\_\_c, which ranges from 1 to 195. The view is filtered on Gis Substation and Gis Circuit. The Gis Substation filter keeps BONNET. The Gis Circuit filter keeps 42F1.

These customers account for 1.087 MW of peak demand. Our C&I customers can typically curtail ~30% of their peak load. So that would get us about 0.3MW of curtailment if we are able to sign up all these large customers/accounts.

Figure 2. Map View of Narragansett Customers



Map based on average of Long and average of Lat. Color shows details about Service Account Number. Size shows sum of Peak\_Demand\_\_c. The data is filtered on Gis Substation and Gis Circuit. The Gis Substation filter keeps BONNET. The Gis Circuit filter keeps 42F1.

The Targeted Dispatch incentive rate is \$35/kW. In the summer of 2018, National Grid demonstrated that we can successfully target C&I customers in a constrained geographic location by doubling this incentive to \$70/kW. The incremental cost of the added incentive for 0.3MW of load would be  $(\$70/\text{kW} - \$35/\text{kW}) * 0.3\text{MW} * 1000\text{kW}/\text{MW} = \$11,414$  per year in costs the NWA project would need to carry.

#### **C&I Demand Response – Daily Dispatch (DD)**

The Daily Dispatch incentive rate is \$300/kW. With a larger incentive, some of the large accounts above may install batteries or other technologies to participate in Daily Dispatch. We have very few C&I

customers in the Daily Dispatch program so far. So, it is hard to estimate what the customer uptake would be. However, if we doubled the current incentive, I think we could at least get one C&I customer to install a 200kW battery. The incremental cost of the added incentive for a 0.2MW of load would be  $(\$600 - \$300/\text{kW}) * 0.2\text{MW} * 1000\text{kW}/\text{MW} = \$60,00$  per year in costs the NWA project would need to carry.

### **Electric Vehicle Demand Response**

Rhode Island has elected not to enable the Connected Solutions EV or EVSE program until after the SmartCharge pilot ends.

### **Thermostat Demand Response**

There are currently 35 thermostats enrolled in our demand response program on this feeder

The average curtailment per thermostat is 1 kW. So, this represents 0.04 MW of DR potential.

There are about 300 smart thermostats on this feeder that are not enrolled in our DR programs. If we could enroll all of them, this would represent 0.3 MW of DR potential. The best-in-class enrollment rates for thermostat-based residential DR programs is about 45%. So, these additional thermostats represent an achievable curtailment of about 0.1 MW. Achieving this level of penetration would likely require additional marketing of about \$15,000 per year and an increased enrollment incentive rate of \$50 per thermostat.

### **Residential Battery Demand Response**

There are 2 residential accounts on the feeder that already have battery storage systems enrolled in Connected Solutions for a total of 0.01 MW.

There are 72 solar systems in Bristol, which can support battery installations, but are not yet enrolled in Connected Solutions. We could target marketing to these existing solar customers to increase participation in Connected Solutions in this area.

The average size curtailment per battery in our residential program is 6kW. So, the 74 solar customers represent a possible 0.4MW of curtailment. Assuming we could get 100% of customers enrolled is not realistic. However, we have not run this measure long enough to have a good estimate of our penetration potential. For this estimate, we will assume that we can enroll 30% of the market potential. This would give us 0.1 MW of achievable DR potential.

Achieving this DR potential would likely require about \$15,000 per year in additional marketing and doubling the incentive in these zip codes from \$400/kW-year to \$800/kW-year. That would cost an additional  $(\$800/\text{kW-year} - \$400/\text{kW-year}) * 0.2 \text{ MW} * 1000\text{kW}/\text{MW} = \$103,800$  per year.

**Pool Pumps**

Pool pumps will be a new measure in 2022. The Company does not yet have sufficient experience to estimate the customer uptake to estimate potential for this NWA.

**Summary**

This first estimate has identified 0.9 MW of curtailable load in the NWA area with an annual cost of about \$238,589 and a total (12-year) cost of approximately \$2,863,068. In addition to helping meet the NWA needs, these measures would also result in other system benefits (deferred transmission, deferred capacity, and DRIPE).

Table 2. DR Assessment Summary for Bonnet 42F1 NWA Opportunity

DR Type	MW Curtailed	Additional Annual Cost Borne by NWA	# Events Per Year	DR Scaling Factor	Additional Non- NWA System Benefits
C&I Targeted Dispatch	0.3	\$11,414	8	10%	\$18,979
C&I Daily Dispatch	0.2	\$60,000	50	70%	\$81,480
Thermostats	0.1	\$18,375	15	40%	\$31,428
Batteries	0.2	\$103,800	40	70%	\$90,443
NGrid Admin		\$40,000			
Analytics		\$5,000			
<b>Total</b>	<b>0.9</b>	<b>\$238,589</b>			<b>\$222,330</b>

At first approximation, it seems demand response alone cannot solve the NWA need of 1.2 MW and would need to be paired with other EE programs.

**Energy Efficiency Measures Assessment**

**2. EE/DR Analysis Tables**

**Measure #1**

Program	EnergyWise
Sector	Residential
Measure	Weatherization (elec heat and deliverable fuel)
EE/DR Program Manager	Mike Rossacci
Target Feeder	42F1

\*Number of Participants should take into account the life of the measure.

\*\*Values are considered Gross savings.

\*\*\*Incremental costs additional to existing statewide incentive levels.

<b>Potential Achievable Metrics for Weatherization (elec heat and deliverable fuel)</b>							
	Incremental # of Participants*	New Load Relief (kW)**	New Energy Savings (kWh)**	Annual Load Relief (kW)**	Annual Energy Savings (kWh)**	Statewide Incentive Costs (\$)	Targeted Customer Contribution (\$)***
Year 1	2	0.23	323.89	0.23	324	\$ 6,240	\$ 2,080
Year 2	2	0.23	323.89	0.46	648	\$ 6,240	\$ 2,080
Year 3	2	0.23	323.89	0.69	972	\$ 6,240	\$ 2,080
Year 4	2	0.23	323.89	0.92	1,296	\$ 6,240	\$ 2,080
Year 5	2	0.23	323.89	1.15	1,619	\$ 6,240	\$ 2,080
Year 6	2	0.23	323.89	1.38	1,943	\$ 6,240	\$ 2,080
Year 7	3	0.35	485.84	1.73	2,429	\$ 9,360	\$ 3,120
Year 8	3	0.35	485.84	2.07	2,915	\$ 9,360	\$ 3,120
Year 9	3	0.35	485.84	2.42	3,401	\$ 9,360	\$ 3,120
Year 10	3	0.35	485.84	2.76	3,887	\$ 9,360	\$ 3,120
Year 11	3	0.35	485.84	3.11	4,373	\$ 9,360	\$ 3,120
Year 12	3	0.35	485.84	3.45	4,858	\$ 9,360	\$ 3,120
<b>Total †</b>	<b>30</b>	<b>3.45</b>	<b>4,858</b>	<b>3.45</b>	<b>4,858</b>	<b>\$ 93,600</b>	<b>\$ 31,200</b>

† Sum totals taken for all datapoints except for Annual Load Relief (kW), as power (kW) is an instantaneous value independent of time (additive vs cumulative). Max taken instead for kW. Max also taken for Annual Energy Savings (kWh) as it is already cumulatively summed.

Additional measure detail:

Incremental annual marketing costs of \$4,000 per year. 10% lift in weatherization over EE levels in years 1-6 and 15% lift over 2019 year-end EE results.
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**Measure #2**

Program	
Sector	Commercial and Industrial
Measure	C&I Measure Mix
EE/DR Program Manager	
Target Feeder	42F1

Additional measure detail:

The 5-year average kW reduction for the Bonnet 42F1 Feeder was 4.72 kW. The largest demand reduction occurred in 2013 and accounted for a 14.43 kW. The max achievable kW reduction was calculated as a 10 percent of the highest annual kW reduction. Therefore, the maximum incremental kW reduction was calculated to be 1.44 kW (10% of 14.43 kW), for a total kW reduction of 15.87 kW on the Bonnet 42F1 feeder. The maximum incremental reduction of 1.44 kW is not significant enough to warrant further analysis.

**Summary**

This EE estimate has identified 3.45 kW of total potential incremental load reduction in the NWA area with a total (12-year) incremental cost of approximately \$79,200 (additional total incentives of \$31,200 with annual marketing costs of \$4,000 over twelve years). In addition to helping meet the NWA needs, these measures would also result in other system benefits associated with standard energy efficiency program measures per Docket 4600.

The energy efficiency measure assessment does not appear to effectively address the NWA need or complement other portfolio solutions within the parameters of the opportunity requirements and economics.



## South Kingstown NWA Opportunity (South Kingstown, RI)

### Overview

The South Kingstown NWA opportunity reflects a system need of 3.7 MW load reduction and 16.2 MWh energy reduction. This NWA opportunity has a planned implementation timeframe of 13 years from 2022 to 2034.

The DR estimate for this NWA opportunity has identified 1.3 MW of curtailable load in the NWA area with an annual cost of about \$294,474 and a total (13-year) cost of approximately \$3,828,162, as detailed below. This load relief is only 36% of the NWA goal of 3.7 MW. In addition to helping meet the NWA needs, these measures would also result in other system benefits (deferred transmission, deferred capacity, and DRIPE).

The EE estimate for this NWA opportunity has identified 37.3 kW of total potential incremental load reduction in the NWA area with a total (13-year) cost of approximately \$263,380 (additional total incentives of \$126,880 with annual marketing costs of \$10,500 over thirteen years). In addition to helping meet the NWA needs, these measures would also result in other system benefits associated with standard energy efficiency program measures per Docket 4600.

Together, the DR and EE estimates represent approximately 1.3 MW of load reduction and an estimated total (13-year) cost of approximately \$4,091,542. This contrasts with a distribution deferral value of \$1,205,640 and an estimated Approximate Value of \$4,560,000. Note that the Approximate Value for NWA opportunities includes the deferral value and any additional benefit value that is preliminarily applicable.

The energy efficiency and demand response measure assessments do not appear to effectively address the NWA need or complement other portfolio solutions within the parameters of the opportunity requirements and economics.

**Demand Response Measures Assessment**

**C&I Demand Response – Targeted Dispatch**

There are 3 large C&I customers and 36 accounts on the Peacedale 59F3 and Kenyon 68F2 feeders. The peak demand for these customers adds up to 1.6 MW. Three of these customers have a peak demand of greater than 100kW and would be great candidates for our C&I demand response programs.

Figure 3. Annual Peak Demand of Top Customers in South Kingstown

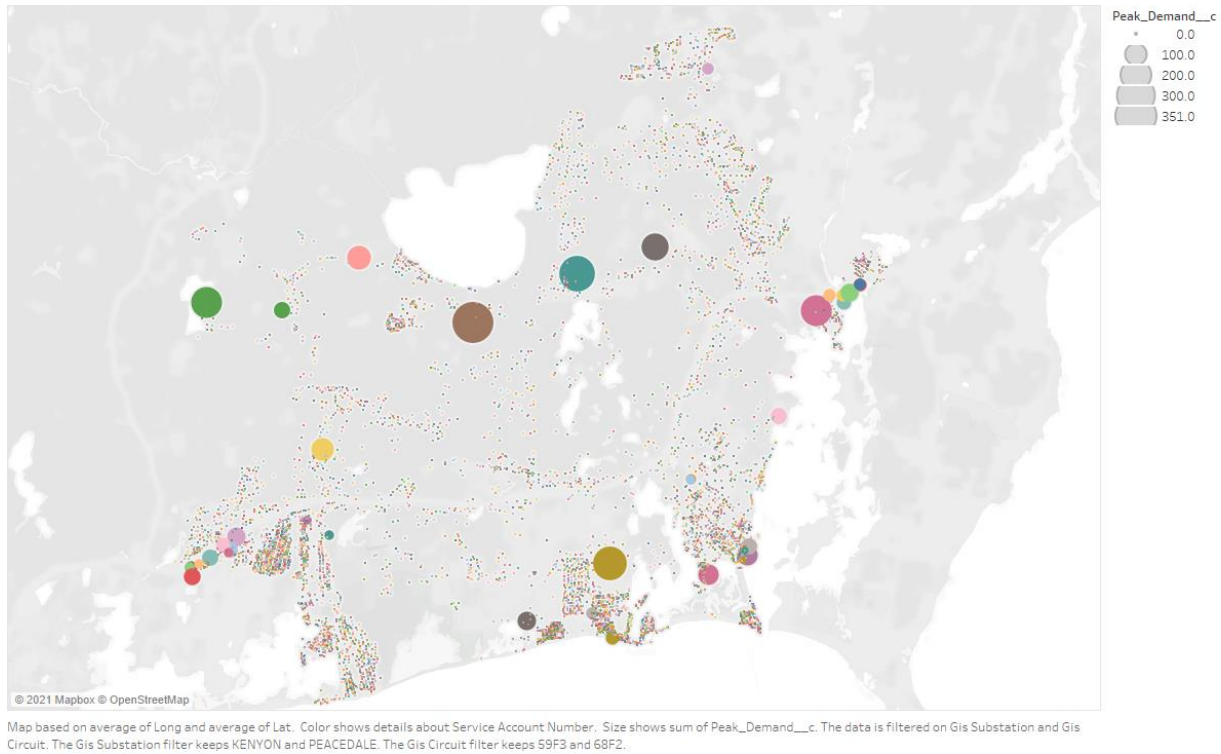


Sum of Peak\_Demand\_\_c for each Name. Color shows details about Service Account Number. The data is filtered on Gis Substation, Gis Circuit and minimum of Peak\_Demand\_\_c. The Gis Substation filter keeps KENYON and PEACE DALE. The Gis Circuit filter keeps 59F3 and 68F2. The minimum of Peak\_Demand\_\_c filter ranges from 1 to 195.

Figure 4. Demand Response Customer Load Demand Breakdown, Table

Gis Circuit	Gis Substation	Name	Service Account Number	Peak_Demand_c
59F3	PEACEDALE	Customer names and account numbers redacted	004	19
59F3	PEACEDALE		006	54
59F3	PEACEDALE		009	87
59F3	PEACEDALE		036	67
59F3	PEACEDALE		017	31
59F3	PEACEDALE		002	11
59F3	PEACEDALE		007	86
59F3	PEACEDALE		007	50
59F3	PEACEDALE		008	32
59F3	PEACEDALE		009	42
59F3	PEACEDALE		018	33
59F3	PEACEDALE		001	11
59F3	PEACEDALE		002	37
59F3	PEACEDALE		009	32
59F3	PEACEDALE		003	26
59F3	PEACEDALE		026	28
59F3	PEACEDALE		002	152
59F3	PEACEDALE		005	21
68F2	KENYON		009	105
68F2	KENYON		008	20
68F2	KENYON		000	49
68F2	KENYON		031	53
68F2	KENYON		031	58
68F2	KENYON		004	45
68F2	KENYON		040	18
68F2	KENYON		019	18
68F2	KENYON		002	117
68F2	KENYON		012	74
68F2	KENYON		001	39
68F2	KENYON		003	31
68F2	KENYON	009	29	
68F2	KENYON	001	18	
68F2	KENYON	007	28	
68F2	KENYON	004	15	
68F2	KENYON	005	32	
68F2	KENYON	014	70	
				1,638

Figure 5. Map View of South Kingstown Customers



Customers in our C&I DR programs typically curtail about 30% of their annual peak demand. So, the customers above represent about 0.5MW of curtailable load.

Our typical C&I DR program pay an incentive of \$35/kW. In the summer of 2018, National Grid demonstrated that we can successfully target C&I customers in a constrained geographic location by doubling this incentive to \$70/kW. The incremental cost of the added incentive for 0.5MW of load would be  $(\$70/\text{kW} - \$35/\text{kW}) * 0.5\text{MW} * 1000\text{kW}/\text{MW} = \$17,199$  per year in costs the NWA project would need to carry.

### Thermostat Demand Response

There are currently 70 thermostats enrolled in our demand response program on the target feeders.

The average curtailment per thermostat is 1 kW. So, this represents 0.01 MW of DR potential.

There are about 700 smart thermostats in these ZIP codes that are not enrolled in our DR programs. If we could enroll all of them, this would represent 0.7 MW of DR potential. The best-in-class enrollment rates for thermostat-based residential DR programs is a about 45%. So, these additional thermostats represent an achievable curtailment of about 0.3 MW. Achieving this level of penetration would likely require additional marketing of about \$15,000 per year an increased enrollment incentive rate of \$50 per thermostat.

### Residential Battery Demand Response

There are 9 residential accounts on the feeder that already have battery storage systems enrolled in Connected Solutions for a total of 0.05 MW.

There are 112 solar systems on the target feeders, which can support battery installations, but are not yet enrolled in Connected Solutions. We could target marketing to these existing solar customers to increase participation in Connected Solutions in this area.

The average size curtailment per battery in our residential program is 6kW. So, the 112 solar customers represent a possible 0.7 MW of curtailment. Assuming we could get 100% of customers enrolled is not realistic. However, we have not run this measure long enough to have a good estimate of our penetration potential. For this estimate, we will assume that we can enroll 50% of the market potential. This would give us 0.3 MW of achievable DR potential.

Achieving this DR potential would likely require about \$15,000 per year in additional marketing and doubling the incentive in these zip codes from \$400/kW-year to \$800/kW-year. That would cost an additional  $(\$800/\text{kW-year} - \$400/\text{kW-year}) * 0.3 \text{ MW} * 1000\text{kW}/\text{MW} = \$149,400$  per year.

### Summary

This estimate has identified 1.3 MW of curtailable load in the NWA area with an annual cost of about \$294,474 and a total (13-year) cost of approximately \$3,828,162. This is only 36% of the NWA goal of 3.7 MW of load reduction.

At first approximation, it seems the demand response alone cannot solve the NWA need and would need to be paired with other energy efficiency measures to reduce load in the NWA area.

Table 3. DR Assessment Summary for South Kingstown NWA Opportunity

DR Type	MW Curtailed	Additional Annual Cost Borne by NWA	# Events Per Year	DR Scaling Factor	Additional Non-NWA System Benefits
C&I Targeted Dispatch	0.5	\$17,199	8	10%	\$28,599
C&I Daily Dispatch	0.2	\$60,000	50	70%	\$81,480
Thermostats	0.3	\$22,875	15	40%	\$73,332
Batteries	0.3	\$149,400	40	70%	\$136,886
NGrid Admin		\$40,000			
Analytics		\$5,000			
<b>Total</b>	<b>1.3</b>	<b>\$294,474</b>			<b>\$320,298</b>

**Energy Efficiency Measures Assessment**

**2. EE/DR Analysis Tables**

**Measure #1**

Program	EnergyWise
Sector	Residential
Measure	Weatherization (elec heat and deliverable fuel)
EE/DR Program Manager	Mike Rossacci
Target Feeder	Peacedale 59F3

\*Number of Participants should take into account the life of the measure.

\*\*Values are considered Gross savings.

\*\*\*Incremental costs additional to existing statewide incentive levels.

<b>Potential Achievable Metrics for Weatherization (elec heat and deliverable fuel)</b>							
	Incremental # of Participants*	New Load Relief (kW)**	New Energy Savings (kWh)**	Annual Load Relief (kW)**	Annual Energy Savings (kWh)**	Statewide Incentive Costs (\$)	Targeted Customer Contribution (\$)***
Year 1	3	0.34	486	0.34	486	\$ 9,360	\$ 3,120
Year 2	3	0.34	486	0.68	972	\$ 9,360	\$ 3,120
Year 3	3	0.34	486	1.02	1,457	\$ 9,360	\$ 3,120
Year 4	3	0.34	486	1.36	1,943	\$ 9,360	\$ 3,120
Year 5	3	0.34	486	1.70	2,429	\$ 9,360	\$ 3,120
Year 6	3	0.34	486	2.04	2,915	\$ 9,360	\$ 3,120
Year 7	3	0.34	486	2.38	3,401	\$ 9,360	\$ 3,120
Year 8	4	0.46	648	2.84	4,049	\$ 12,480	\$ 4,160
Year 9	4	0.46	648	3.30	4,696	\$ 12,480	\$ 4,160
Year 10	4	0.46	648	3.76	5,344	\$ 12,480	\$ 4,160
Year 11	4	0.46	648	4.22	5,992	\$ 12,480	\$ 4,160
Year 12	4	0.46	648	4.68	6,640	\$ 12,480	\$ 4,160
Year 13	4	0.46	648	5.14	7,287	\$ 12,480	\$ 4,160
<b>Total †</b>	<b>45</b>	<b>5.14</b>	<b>7,287</b>	<b>5.14</b>	<b>7,287</b>	<b>\$ 140,400</b>	<b>\$ 46,800</b>

† Sum totals taken for all datapoints except for Annual Load Relief (kW), as power (kW) is an instantaneous value independent of time (additive vs cumulative). Max taken instead for kW. Max also taken for Annual Energy Savings (kWh) as it is already cumulatively summed.

Additional measure detail:

Incremental annual marketing costs of \$5,500 per year. 10% lift in weatherization over EE levels in years 1-5 and 15% lift over 2019 year-end EE results.
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**Measure #2**

Program	EnergyWise
Sector	Residential
Measure	Weatherization (elec heat and deliverable fuel)
EE/DR Program Manager	Mike Rossacci
Target Feeder	Kenyon 68F2

\*Number of Participants should take into account the life of the measure.

\*\*Values are considered Gross savings.

\*\*\*Incremental costs additional to existing statewide incentive levels.

Potential Achievable Metrics for Weatherization (elec heat and deliverable fuel)							
	Incremental # of Participants*	New Load Relief (kW)**	New Energy Savings (kWh)**	Annual Load Relief (kW)**	Annual Energy Savings (kWh)**	Statewide Incentive Costs (\$)	Targeted Customer Contribution (\$)**
Year 1	5	0.56	810	0.56	810	\$ 15,600	\$ 5,200
Year 2	5	0.56	810	1.12	1,619	\$ 15,600	\$ 5,200
Year 3	5	0.56	810	1.68	2,429	\$ 15,600	\$ 5,200
Year 4	5	0.56	810	2.24	3,239	\$ 15,600	\$ 5,200
Year 5	5	0.56	810	2.80	4,049	\$ 15,600	\$ 5,200
Year 6	5	0.56	810	3.36	4,858	\$ 15,600	\$ 5,200
Year 7	5	0.56	810	3.92	5,668	\$ 15,600	\$ 5,200
Year 8	7	0.79	1,134	4.71	6,802	\$ 21,840	\$ 7,280
Year 9	7	0.79	1,134	5.50	7,935	\$ 21,840	\$ 7,280
Year 10	7	0.79	1,134	6.29	9,069	\$ 21,840	\$ 7,280
Year 11	7	0.79	1,134	7.08	10,202	\$ 21,840	\$ 7,280
Year 12	7	0.79	1,134	7.87	11,336	\$ 21,840	\$ 7,280
Year 13	7	0.79	1,134	8.66	12,470	\$ 21,840	\$ 7,280
<b>Total †</b>	<b>77</b>	<b>8.66</b>	<b>12,470</b>	<b>8.66</b>	<b>12,470</b>	<b>\$ 240,240</b>	<b>\$ 80,080</b>

† Sum totals taken for all datapoints except for Annual Load Relief (kW), as power (kW) is an instantaneous value independent of time (additive vs cumulative). Max taken instead for kW. Max also taken for Annual Energy Savings (kWh) as it is already cumulatively summed.

Additional measure detail:

Incremental annual marketing costs of \$5,000. 10% lift in weatherization over EE levels in years 1-5 and 15% lift over 2019 year-end EE results.
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**Measure #3**

Program	Large Commercial Retrofit
Sector	Commercial & Industrial
Measure	C&I Measure Mix
EE/DR Program Manager	
Target Feeder	Peacedale 59F3

Additional measure detail:

The 5-year average kW reduction for the Peacedale 59 Feeder was 43.39 kW. The largest demand reduction occurred in 2014 and accounted for a 64.71 kW. The max achievable kW reduction was calculated as a 10 percent of the highest annual kW reduction. Therefore, the maximum incremental kW reduction was calculated to be 6.47 kW (10% of 64.71 kW), for a total kW reduction of 71.18 kW on the Peacedale 59 feeder. The maximum incremental reduction of 6.47 kW is not significant enough to warrant further analysis.

**Measure #4**

Program	Large Commercial Retrofit
Sector	Commercial & Industrial
Measure	C&I Measure Mix
EE/DR Program Manager	
Target Feeder	Kenyon 68F2

Additional measure detail:

The 5-year average kW reduction for the Kenyon 68 Feeder was 108.99 kW. The largest demand reduction occurred in 2013 and accounted for a 170.61 kW. The max achievable kW reduction was calculated as a 10 percent of the highest annual kW reduction. Therefore, the maximum incremental kW reduction was calculated to be 17.06 kW (10% of 170.61 kW), for a total kW reduction of 187.67 kW on the Kenyon 68 feeder. The maximum incremental reduction of 17.06 kW is not significant enough to warrant further analysis.

**Summary**

This EE estimate has identified 37.3 kW of total potential incremental load reduction in the NWA area with a total (13-year) cost of approximately \$263,380 (additional total incentives of \$126,880 with annual marketing costs of \$10,500 over thirteen years). In addition to helping meet the NWA needs, these measures would also result in other system benefits associated with standard energy efficiency program measures per Docket 4600.



The energy efficiency measure assessment does not appear to effectively address the NWA need or complement other portfolio solutions within the parameters of the opportunity and economics.