

TECHNICAL SESSION
DOCKET 22-47-WW

FEBRUARY 16, 2023

AGENDA

Trust Indenture

- Overview
- Flow of funds

Electricity

- Purchases - Renewables
- “Behind-the Meter”
- Net Metered Production
- Conclusions - Options

TRUST INDENTURE

TRUST INDENTURE

A Trust Indenture is a legal and binding contract between a bond issuer (Narragansett Bay Commission (NBC)) and a Trustee to protect bondholders' interests.

- In anticipation of the separation from the State of Rhode Island, NBC first entered into a Trust Agreement on July 1, 1997, to ensure NBC's payment of State of Rhode Island debt issued on behalf of NBC.
- This was superseded by the Trust Indenture executed on April 15, 2004, as part of NBC's issuance of Variable Rate Demand Bonds.

TRUST INDENTURE

- NBC has executed a total of 31 Supplemental Indentures
- 29 Supplemental Indentures Related to Debt Issuance
 - one for each new debt issue
- 2 Supplemental Indentures that amended the Trust Indenture
 - 7th Supplemental Indenture
 - modified Permitted Investments
 - Dated as of 10/15/2007
 - 10th Supplemental Indenture -
 - established the Operating Reserve for Revenue Stability Fund
 - Dated as of 11/1/2008
 - PUC Docket 3905, Order 19380

TRUST INDENTURE

ARTICLE VI - SETS FORTH BOND COVENANTS

Purpose – prevent deterioration of issuer’s financial health and ensure business continuity

✓	Section 601	Pledge of Revenue
	Section 602	Reserved
✓	Section 603	Rates and Charges
	Section 604	Sale, Lease or Encumbrance of the System
✓	Section 605	Operation, Maintenance and Reconstruction
	Section 606	Insurance and Condemnation
	Section 607	Creations of Liens, Other Indebtedness
	Section 608	Annual Operating Budget
	Section 609	Capital Improvements Budget
	Section 610	Accounts and Reports

TRUST INDENTURE

ARTICLE V – ESTABLISHES TRUST FUNDS AND ACCOUNT STRUCTURE

Fund/Account	Custody	Funded
Revenue Fund	NBC	Yes
Operation and Maintenance Fund	NBC	Yes
Debt Service Fund	Trustee	Yes
Debt Service Payment Accounts		
Stabilization Account		
Project Fund	Trustee	Yes
Project Accounts		
Operating Capital Accounts ("Restricted")		
Grants and Project Reimbursements Account		
Operating Reserve for Revenue Stability Fund	Trustee	Yes
Debt Service Reserve Fund	Trustee	2013 Series C
Redemption Fund	Trustee	No
Operation and Maintenance Reserve Fund	N/A	No
Insurance Reserve Fund	N/A	No
Renewal and Replacement Reserve Fund	N/A	No
Rebate Fund	N/A	No
Unrestricted Fund	N/A	No

TRUST INDENTURE

ARTICLE V – ESTABLISHES TRUST FUNDS AND ACCOUNT STRUCTURE

Fund/Account	Custody	Funded
Revenue Fund	NBC	Yes
Operation and Maintenance Fund	NBC	Yes
Debt Service Fund	Trustee	Yes
Debt Service Payment Accounts		
Stabilization Account		
Project Fund	Trustee	Yes
Project Accounts		
Operating Capital Accounts ("Restricted")		
Grants and Project Reimbursements Account		
Operating Reserve for Revenue Stability Fund	Trustee	Yes
Debt Service Reserve Fund	Trustee	2013 Series C
Redemption Fund	Trustee	No
Operation and Maintenance Reserve Fund	N/A	No
Insurance Reserve Fund	N/A	No
Renewal and Replacement Reserve Fund	N/A	No
Rebate Fund	N/A	No
Unrestricted Fund	N/A	No

Payment of daily operation and maintenance expense

Payment of debt service, if needed

Payment of debt service

Payment of capital costs
Capital Improvement Program
Operating Capital Program

PUC allowed reserve for consumption revenue shortfalls

TRUST INDENTURE

ARTICLE V – ALSO SETS FORTH THE FLOW OF FUNDS

Fund/Account	Custody	Funded
Revenue Fund	NBC	Yes
Operation and Maintenance Fund	NBC	Yes
Debt Service Fund	Trustee	Yes
Debt Service Payment Accounts		
Stabilization Account		
Project Fund	Trustee	Yes
Project Accounts		
Operating Capital Accounts ("Restricted")		
Grants and Project Reimbursements Account		
Operating Reserve for Revenue Stability Fund	Trustee	Yes
Debt Service Reserve Fund	Trustee	2013 Series C
Redemption Fund	Trustee	No
Operation and Maintenance Reserve Fund	N/A	No
Insurance Reserve Fund	N/A	No
Renewal and Replacement Reserve Fund	N/A	No
Rebate Fund	N/A	No
Unrestricted Fund	N/A	No

All receipts other than bond proceeds are deposited in the Revenue Fund⁽¹⁾

These Funds are funded through monthly or annual transfers as set forth in the Trust Indenture

Bond proceeds are deposited into the Project Fund and Debt Service Reserve Fund, if one is funded

⁽¹⁾ Reimbursement of Operation and Maintenance expenses are directly deposited into the Operation and Maintenance Fund

TRUST INDENTURE – FLOW OF FUNDS

MONTHLY TRANSFERS – 3RD TO LAST BUSINESS DAY EACH MONTH

During the month, receipts from user charges and other sources are deposited into the Revenue Fund



First Transfer - Section 504(2)(i)

From Revenue Fund to Operation and Maintenance Fund

- Determined prior to new fiscal year
- Established as part of the budget process
- Calculate percent increase new budget vs. prior budget
- Apply percentage to prior year monthly expense (cash flow)

Monthly Transfers from the Revenue Fund to the Operations and Maintenance Fund		
Date		Amount
Jul 26, 2022	\$	5,071,782
Aug 26, 2022		4,480,074
Sep 27, 2022		2,828,057
Oct 28, 2022		4,729,001
Nov 25, 2022		3,697,086
Dec 27, 2022		4,077,367
Jan 27, 2023		2,923,133
Feb 24, 2023		3,986,281
Mar 28, 2023		4,907,292
Apr 25, 2023		4,907,292
May 26, 2023		4,907,291
Jun 27, 2023		4,907,291
Total	\$	51,421,947

TRUST INDENTURE – FLOW OF FUNDS

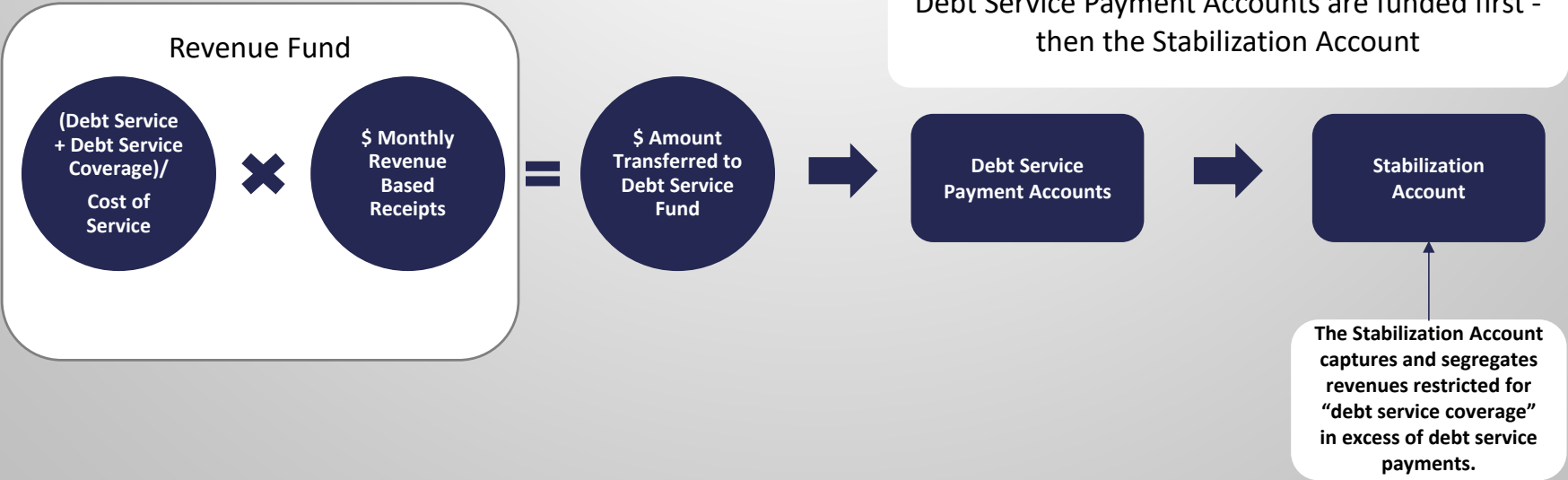
MONTHLY TRANSFERS – 3RD TO LAST BUSINESS DAY EACH MONTH

Second Transfer (Sections 504(2)(ii), 504(2)(vi) and 504(4))

From Revenue Fund to Debt Service Fund

Calculate \$ available for transfer to the Debt Service Fund:

Apply PUC restricted % to monthly revenue-based receipts:



TRUST INDENTURE – FLOW OF FUNDS

MONTHLY TRANSFERS – 3RD TO LAST BUSINESS DAY EACH MONTH

Debt Service Fund

Order of Accounts Funded

First - Debt Service Payment Accounts

- Based on Debt Service Schedules
- Serves to “escrow” debt service
 - 1/6 of interest (paid twice/year)
 - 1/12 of principal (paid once/year)



	Monthly Transfers from the Revenue Fund to Debt Service Fund	
	Date Service Payment Account	2008 A Debt Service Payment Account
Jul 26, 2022	\$ 3,248,975	\$ 191,087
Aug 26, 2022	3,249,335	191,087
Sep 27, 2022	3,314,286	314,179
Oct 28, 2022	3,315,548	314,179
Nov 25, 2022	3,316,550	314,179
Dec 27, 2022	3,317,546	314,179
Jan 27, 2023	3,318,507	314,179
Feb 24, 2023	3,319,348	314,179
Mar 28, 2023	3,320,971	314,179
Apr 25, 2023	3,321,583	314,179
May 26, 2023	3,321,583	314,179
Jun 27, 2023	3,321,583	314,179
Total	\$ 39,685,815	\$ 3,523,964

Funds may be transferred from the Stabilization Account or Revenue Fund if prior monthly transfers have been insufficient to fully fund when required

TRUST INDENTURE – FLOW OF FUNDS

MONTHLY TRANSFERS – 3RD TO LAST BUSINESS DAY EACH MONTH

Debt Service Fund

Order of Accounts Funded

Second – Stabilization Account




- After the Debt Service Payment Accounts are fully funded
- Balance is transferred to the Stabilization Account



TRUST INDENTURE – FLOW OF FUNDS

MONTHLY TRANSFERS – 3RD TO LAST BUSINESS DAY EACH MONTH

Miscellaneous Other Transfers

-  Revenue Fund to Operation and Maintenance Fund - Section 504(2)(i) and Section 608
Reimbursement of other Operation and Maintenance expenses paid from Operations and Maintenance Fund such as customer refunds and state septage surcharge payments
-  Revenue Fund to Project Fund - Section 503(6)
Grant and Project Reimbursements (capital related, permitted in Trust Indenture)
-  Project Fund to Operation and Maintenance Fund
Reimbursements of Operating Capital or other Capital Costs paid from Operation and Maintenance Fund

TRUST INDENTURE – FLOW OF FUNDS

ANNUAL TRANSFERS – END OF THE FISCAL YEAR

➔ Operation and Maintenance Fund to Revenue Fund (Section 505)

Any excess funds in the Operation and Maintenance Fund are transferred to the Revenue Fund

➔ Debt Service Fund to Project Fund (Section 506(6)(v))

Monies on deposit in the Stabilization Account of the Debt Service Fund may be applied to other purposes as the NBC may direct that are not inconsistent with any order of the PUC.



TRUST INDENTURE – FLOW OF FUNDS

ANNUAL TRANSFERS – END OF THE FISCAL YEAR

FY 2022 FINAL TRANSFER CALCULATION

Debt Service Fund - Stabilization Account to Project Fund - Operating Capital Accounts

June Cash Balance Available 6/30/2021	\$ 48,256,746	Debt Service Fund - Debt Service Payment and Stabilization Accounts
July Transfer (July Debt/ June rest receipts)		From Revenue Fund to Debt Service Fund Debt Service Payment and Stabilization Accounts
June Debt interest (used in July)		Interest earned on the Debt Service Fund Accounts
June Cash Balance Available net of July's transfer		Debt Service Fund Accounts after July Transfer
Required Trust Balance		
"Carry-Over" transfer amount	(16,158,405)	Debt Service Payment Account Required Balances (1/12 principal and 1/6 as of 6/30/2022)
Restricted receipts 2022	58,236,612	PUC Restricted % of Cash Receipts for Debt and Debt Coverage
Interest	77,084	Interest earned on the Debt Service Fund Accounts
RIB Refunding (One-time Payment)	2,609,938	Deposited in Revenue Fund and transferred to Debt Service Fund Stabilization Account
Debt Service 2022 Expenses	(41,405,298)	Debt service payments from Debt Service Fund Debt Service Payment Accounts
PUC Docket 5224 - One-time Reimbursement of Electronic Payment Transaction Fees	(742,801)	Debt Service Fund Stabilization Account to the Operation and Maintenance Fund
June Cash Balance Available (6/30/2022)	50,873,876	Debt Service Fund - Debt Service Payment and Stabilization Accounts
July Transfer (July Debt/ June rest receipts)		Revenue Fund to Debt Service Fund Debt Service Payment and Stabilization Accounts
June Cash Balance Available		Debt Service Fund Accounts after July Transfer
Required Trust Balance		Debt Service Payment Account Required Balances (1/12 principal and 1/6 as of 6/30/2022)
"Carry-Over" transfer amount	19,555,422	
Transfer	19,555,422	Balance Available for transfer from Debt Service Fund Stabilization Account to Project Fund Operating Capital Accounts
Operating Capital Account Project Fund	(3,480,003)	Debt Service Fund Stabilization Account to Project Fund Operating Capital Account - OCP
Operating Capital Account Project Fund	\$ 16,075,419	Debt Service Fund Stabilization Account to Project Fund Operating Capital Account - Pay-go

OPERATING CAPITAL PROGRAM BUDGET FY 2023

Operating Capital Program (OCP) Budget FY 2023	\$ 3,812,000
Cash Balance in Restricted Operating Capital Account	401,659
FY 2022 Accruals	(69,662)
Balance Available in Restricted Operating Capital Account	331,997
Carryover transfer to Restricted Operating Capital Account to cover OCP Budget FY 2023	\$ 3,480,003

TRUST INDENTURE

USE OF DEBT SERVICE MONIES TRANSFERRED TO THE RESTRICTED OPERATING CAPITAL ACCOUNTS OF THE PROJECT FUND

OPERATING CAPITAL PROGRAM

- Purchase of capital assets (removed from cost of service)

CAPITAL IMPROVEMENT PROGRAM

- Purchase of land, temporary and permanent easements to reduce recordkeeping and tracing associated with tax-exempt financing
- Funding of projects not eligible/feasible for funding through the Rhode Island Infrastructure Bank
 - Too low on Project Priority List
 - Increase project cost or not timely to obtain a Certificate of Approval from RIDEM
 - Small projects
- Project is not part of a WIFIA-funded program through US EPA
- Funding will serve as non-federal match for WIFIA funded projects

OPERATING CAPITAL ACCOUNTS

USE OF PUC RESTRICTED FUNDS

USE OF PUC RESTRICTED FUNDS (OPERATING CAPITAL ACCOUNTS IN THE PROJECT FUND)							
CAPITAL IMPROVEMENT PROJECTS	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2018 - YTD
BP RESILIENCY IMPROVEMENTS	\$ 16,014	\$ 113,436	\$ 899,897	\$ 455,547	\$ -	\$ -	\$ 1,484,895
CSO PHASE IIIA	2,322,708	521,440	7,067,271	1,911,070	1,137,490	14,614,675	27,574,655
FP RESILIENCY IMPROVEMENTS	4,787	5,688	340	3,450	1,501,446	560,881	2,076,592
INFRASTRUCTURE MANAGEMENT	439,014	213,439	481,605	187,255	169,473	66,689	1,557,476
INTERCEPTOR CLEANING & RESTORATION	559,704	151,204	478,535	297,080	858,448	493,526	2,838,498
INTERCEPTOR RESTORATION & CONSTRUCTION	8,346,568	3,590,456	218,866	725,297	268,862	376,715	13,526,764
SEWER SYSTEM IMPROVEMENTS	196,457	170,827	59,367	21,715	56,163	78,843	583,373
WWTF IMPROVEMENTS	1,829,652	2,161,622	2,481,937	6,539,066	2,583,617	852,193	16,448,087
Total	\$ 13,714,905	\$ 6,928,112	\$ 11,687,819	\$ 10,140,481	\$ 6,575,500	\$ 17,043,523	\$ 66,090,339
OPERATING CAPITAL PROGRAM	\$ 4,233,915	\$ 3,887,534	\$ 2,280,518	\$ 3,192,306	\$ 3,862,859	\$ 935,551	\$ 18,392,683

COMPLIANCE REPORTING

PUC RESTRICTED FUNDS

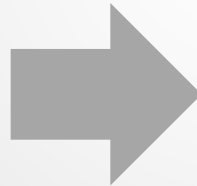
NBC submits Compliance Reporting on the Restricted Accounts quarterly



Narragansett Bay Commission Docket #5224 Compliance Reporting on Restricted Accounts for FY 2022							
Percentage	PROJECT FUND			DEBT SERVICE FUND			
	Cash Receipts	Operating Capital Account (Rest - OCP)	Operating Capital Account (Rest - CIP)	Operating Reserve for Revenue Stability Fund	Actual Transfer Debt Service Fund (Based on PUC %)	Interest	Total Debt Service Fund
Receipts:							
Beginning Balance		1,532,683.47	4,642,535.03	4,500,459.15	48,256,745.63		48,256,745.63
Reallocation of funds to required balance:							
Carryover Tran 8/27/2021		3,317,934.37	12,840,470.43		(16,158,404.80)		(16,158,404.80)
Interest Transfer 7/27/2021				(459.15)			
Interest Transfer 10/26/2021				(296.02)			
Interest Transfer 1/28/2022				(296.12)			
Interest Transfer 4/26/2022				(704.15)			
Transfer from Grant Reimb. 02/08/2022					2,609,937.84		2,609,937.84
Transfer to O&M Fund Checking 06/28/2022					(742,801.00)		(742,801.00)
Subtotal		4,850,617.84	17,483,005.46	4,498,703.71	33,965,477.67	0.00	33,965,477.67
July-21	8,318,644.09	29.34	102.90	99.75	4,888,035.27	910.77	4,888,946.04
August-21	8,774,211.32	29.69	144.21	99.74	5,340,428.32	1,027.41	5,341,455.73
September-21	8,015,731.58	84.68	359.85	96.53	4,525,342.13	59.46	4,525,401.59
October-21	9,400,439.22	80.71	350.74	99.75	5,523,698.09	182.75	5,523,880.84
November-21	10,086,346.38	72.95	328.37	96.53	5,926,737.13	274.64	5,927,011.77
December-21	9,575,930.51	68.32	322.42	99.84	5,626,816.77	403.12	5,627,219.89
January-22	9,417,341.48	59.66	298.36	99.75	5,533,629.85	533.28	5,534,163.13
February-22	7,630,683.68	44.13	254.01	90.09	4,483,789.73	633.54	4,484,423.27
March-22	9,566,765.16	219.68	1,395.94	514.31	5,621,431.21	3,631.98	5,625,063.19
April-22	8,333,175.17	402.71	2,764.94	1,060.31	4,061,025.21	8,531.48	4,069,556.69
May-22	7,998,972.99	763.69	6,044.85	2,394.46	3,369,260.99	22,081.50	3,391,342.49
June-22	7,966,129.76	683.84	9,431.78	3,851.71	3,336,417.76	38,814.40	3,375,232.16
	105,084,371.34	4,853,157.24	17,504,803.83	8,602.77	58,236,612.46	77,084.33	58,313,696.79
Expenses:							
July-21		711,041.39	0.00		22,790.00		22,790.00
August-21		394,009.33	214,361.53		69,885.00		69,885.00
September-21		96,979.06	492,443.13		34,835,647.85		34,835,647.85
October-21		97,867.01	1,054,736.63		38,500.00		38,500.00
November-21		436,281.54	428,049.38		4,634.50		4,634.50
December-21		258,909.48	1,032,105.53		-		0.00
January-22		556,417.71	861,243.49		-		0.00
February-22		246,789.96	755,260.45		64,300.00		64,300.00
March-22		326,607.62	432,638.98		6,347,149.97		6,347,149.97
April-22		365,207.47	571,640.05		-		0.00
May-22		361,578.45	310,533.27		-		0.00
June-22		599,125.53	330,987.24		22,390.92		22,390.92
		4,450,814.55	6,483,999.68	-	41,405,298.24		41,405,298.24
Balance	\$	402,342.69	\$ 11,020,804.15	\$ 4,507,306.48	\$ 50,796,791.89	\$ 77,084.33	\$ 50,873,876.22
Docket #4890 effective July, 2019:	Debt %		47.01%				
	Debt Coverage %		11.75%				
			58.76%				
Docket #5224 effective May 1, 2022:	Debt %		46.76%				
	Debt Coverage %		11.69%				
			58.45%				

COMPLIANCE REPORTING PUC RESTRICTED FUNDS

NBC submits Capital Project
Compliance Reporting
semiannually



Narragansett Bay Commission
Capital Project Compliance Reporting
Period Ending: June 30, 2022

Project	Actual / Projected Start Date	Actual / Projected Completion	Total Estimated Project Cost	Total Paid to Date	Percent Complete*
1140100 RIVER MODEL DEVELOPMENT	Mar-05	Apr-22	595,524	451,914	75.9%
1140500 NBC ENERGY SUSTAINABILITY	Jan-16	Complete	668,795	547,963	81.9%
1140600 RIPDES COMPLIANCE IMPROVEMENTS	Mar-18	Dec-23	1,170,904	547,767	46.8%
1140800 PILOT RESTORATION INITIATIVE	Oct-21	Dec-26	193,500	2,064	1.1%
1140900 WATER QUALITY MODEL VALIDATION AND ENHANCEMENT	Aug-22	Jun-26	163,000	-	0.0%
12400C NEW IM FACILITIES CONST	Jun-25	Jun-27	9,112,000	-	0.0%
12400D NEW IM FACILITIES-DESIGN	Jun-23	Jun-25	875,128	378	0.0%
20000 WWTF IMPROVEMENTS	Mar-18	Ongoing	2,500,000	-	0.0%
20200C FY2019 WWTF IMPROVEMENTS	Apr-20	Jun-23	4,892,760	2,706,473	55.3%
20300C FPWWTF IMPROVEMENTS C	Oct-21	Mar-25	19,748,664	1,105,060	5.6%
20300D FPWWTF IMPROVEMENTS	Dec-21	Nov-23	1,523,252	40,698	2.7%
20400C FP ESPS IMPVTS	Aug-22	Dec-25	9,112,000	-	0.0%
20400D FP ESPS IMPVTS	Jul-21	Apr-25	4,865,693	345,447	7.1%
20500C FPWWTF MAINTEN/STORAGE BLDGS	Jul-22	Jun-25	23,446,000	-	0.0%
20500D FPWWTF MAINTEN/STORAGE BLDGS	Dec-21	Jun-23	2,962,500	20,284	0.7%
20600C NBC SOLAR CARPORT	May-21	Mar-22	1,059,000	4,946	0.5%
20700D LONG-RANGE BIOSOLIDS DISPOSAL	Jul-21	Feb-25	10,481,962	54,764	0.5%
20801C DATA COMM ETHERNET UPGRADE	Jun-22	Dec-24	2,485,000	564	0.0%
20801D DATA COMM ETHERNET UPGRADE	Dec-22	Jan-24	355,000	-	0.0%
24000P NBC FACILITY ELECT IMPROVMENTS	Nov-21	Jul-23	475,075	-	0.0%
30315C CSO PHASE II - WCSO OF 046	Jun-23	Oct-24	3,738,940	105,947	2.8%
30400C INTERCEPTOR RESTORATION AND CONSTRUCTION	Jul-01	Ongoing	7,500,000	-	0.0%
30400M INTERCEPTOR INSPECTION AND CLEANING	Jul-01	Ongoing	2,500,000	-	0.0%
30421C LOUISQUISSET REPAIR - CONST.	Jan-23	Jun-24	6,462,500	-	0.0%
30467C IMPROVEMENTSINTERCEPTORSFY2019	Jan-19	May-22	3,332,642	3,180,855	95.4%
30480M COMPLETION BASELINE SIPHON	Jul-22	Oct-22	762,000	3,843	0.5%
30500C NBC INTERCEPTOR EASEMENTS C	Nov-23	Jul-25	964,250	-	0.0%
30500D NBC INTERCEPTOR EASEMENTS D	Sep-22	Jan-24	465,143	-	0.0%
30503C NBC INT. EASEMENT-BVI WETLANDS	Dec-18	Jan-21	586,179	619,633	105.7%
30610C NBC SYSTEMWIDE REGULATOR MOD	Jan-23	Jan-23	2,717,000	-	0.0%
30610D NBC SYSTEMWIDE REGULATOR MOD	Dec-21	Dec-22	603,000	19,615	3.3%
30700D SYSTEM WD FACILITIES PLANNING	Jan-23	Jan-25	753,500	-	0.0%
30800C CSO PHASE IIIA CONST MINGT	Jan-21	Feb-28	55,137,786	5,792,011	10.5%
30800D CSO PHASE III A DESIGN	Apr-13	Dec-23	74,566,279	60,616,076	81.3%
30801C CSO PHASE IIIA TUNNEL-PUMP ST	Dec-20	Feb-26	488,600,353	166,726,870	34.1%
30802C CSO PHASE III A FACILITIES TUNNEL PUMP STATION FIT OUT	Jan-24	Feb-27	105,021,000	-	0.0%
30803C CSO PHASE III A FACILITIES OF 205	Jan-24	Oct-25	6,270,000	-	0.0%
30804C CSO PHASE III A FACILITIES OF 210,213,214	Nov-23	Oct-25	28,226,000	-	0.0%
30805C CSO IIIA OF 217	Dec-21	Jan-23	18,851,269	2,751,561	14.6%
30807C CSO PHASE IIIA REG. MOD.	Dec-21	Aug-22	7,640,595	370,314	4.8%
30809C CSO PH. III FACILITIES - GSI	Sep-19	Jun-24	10,858,344	5,120,163	47.2%
30810C CSO IIIA BP CLAR.-FS	Jan-23	Jun-25	47,026,000	30,207	0.1%
30830C CSO PHASE III B FACILITIES CONSTRUCTION	Dec-28	Jun-31	28,484,000	-	0.0%
30850C CSO PHASE III C FACILITIES CONSTRUCTION	Apr-34	Jun-37	141,540,000	-	0.0%
30850D CSO PHASE III C FACILITIES DESIGN	May-32	Jun-34	23,120,000	-	0.0%
30870C CSO PHASE III D FACILITIES CONSTRUCTION	Aug-39	Dec-41	70,320,000	-	0.0%
30870D CSO PHASE III D FACILITIES DESIGN	Apr-37	Sep-39	13,118,000	-	0.0%
40101C FPWWTF ELECTRICAL IMPROVEMENTS	Jan-23	Dec-24	9,386,000	-	0.0%
40101D FPWWTF ELECTRICAL IMPROVEMENTS	May-22	Dec-23	900,000	-	0.0%
40200C NBC SYSTMWDE INFLW REDUC PRGM C	Mar-24	Nov-25	641,580	-	0.0%
40200D NBC SYSTMWDE INFLW REDUC PRGM D	Oct-22	Aug-25	581,000	-	0.0%
40300P MUNCPL SEWER ACQU IMPACT P	Jun-24	May-26	480,700	-	0.0%
40550C RIPDES FLOW MONITORING SYSTEM IMPLEMENTATION	Jul-22	Nov-23	1,649,000	-	0.0%
70900C OMEGA PUMP STATION UPGRADE CONSTRUCTION	Jun-23	Aug-25	6,718,000	-	0.0%
70900D OMEGA PUMP STATION UPGRADE	May-21	Jul-23	677,221	2,927	0.4%
71000C LINCOLN SEPTAGE STATION REPL	May-24	Jul-26	5,765,000	-	0.0%
71000D LINCOLN SEPTAGE STATION REPL	Nov-22	Jul-24	725,000	19,230	2.7%
81000C BP UV DISINFECTION IMPVTS	Mar-22	Nov-24	18,471,300	217,158	1.2%
81600C BPWWTFIMPROVEMENTS C	Oct-19	Jun-25	9,828,311	4,629,052	47.1%
81600D BPWWTFIMPROVEMENTS	Jun-19	Apr-23	715,390	93,115	13.0%
81700C BPWWTF OPS & MAIN BLDGS	Nov-20	Jul-24	39,029,708	11,563,390	29.6%
81800C BPWWTF SLUDGE DIGESTION FACILITY IMPROVEMENTS	Dec-22	Jun-26	4,750,000	-	0.0%
81800D BPWWTF SLUDGE DIGEST FAC IMPV	Nov-21	Dec-24	1,455,034	24,972	1.7%
90900C COB FACILITIES IMPROVEMENTS C	Mar-19	Apr-22	6,460,750	6,116,576	94.7%
			1,354,084,531	273,831,839	20.2%

* Percent complete is calculated by dividing the Total Paid to Date by Total Estimated Project Cost.

TRUST INDENTURE – FLOW OF FUNDS

OPERATING CAPITAL – PROJECTED USE⁽¹⁾

- NBC works with its municipal advisor to update long-term finance model annually
- Monies available for transfer from the Debt Service Fund to the Project Fund for OCP and CIP
- Model outputs include projected use of those funds to optimize CIP financing costs

Sources of Funds (Millions)	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028
New SRF Bonds	\$ -	\$ 90,824,948	\$ 196,469,898	\$ 60,654,898	\$ 13,764,795	\$ -
2021 Series A	1,000,000	-	-	-	-	-
Project Fund - Pay-go	26,836,186	14,573,081	18,174,911	15,941,961	16,742,356	5,616,000
Project Fund - Restricted OCP	3,812,000	5,000,000	5,000,000	5,000,000	5,000,000	5,000,000
2020 Series B - WIFIA 1	102,300,903	-	-	-	-	-
2020 Series C - WIFIA 2	80,656,987	87,801,559	-	-	-	-
2022 Series A - WIFIA 3	8,982,856	27,680,997	15,356,088	-	-	-
Total	\$ 223,588,932	\$ 225,880,585	\$ 235,000,897	\$ 81,596,859	\$ 35,507,151	\$ 10,616,000

(1) CIP 2023 – 2028 identified sources, will change with new CIP adoption

ELECTRICITY

ELECTRICITY

ELECTRICITY AND RENEWABLES CONCERNS

NBC's facilities require a large amount of electricity to operate pumps and other equipment

After deregulation of electricity, NBC began to bid electricity supply

NBC's supply rate may not always be lower than the C-06 Net Metering Credit rate

Increased unpredictability of natural gas and electricity pricing due to economy, climate change and other world events

Variable production from renewable sources with significant \$ impact

ELECTRICITY

ELECTRICITY USE AND RENEWABLES HISTORY

“Behind the Meter”

NBC entered the renewables market - Field’s Point Wind Turbines, reducing power purchases and generating revenue from the sale of Renewable Energy Credits (RECs)

Construction of the Bucklin Point Biogas Cogeneration Facility, to reduce power purchases and generate RECs has faced operational challenges

Net Metered Facilities

Legislation created Net Metering Credit (NMC) program and NBC purchased 3 remote net metered turbines in Coventry – NBC retains 100% of the NMC and RECs

NBC entered into two Power Purchase Agreements for remote renewable resources – NBC retains 25% of the NMC earned and 100% of the RECs generated

ELECTRICITY

ELECTRICITY USE AND RENEWABLES HISTORY

Primary concerns of NBC related to electricity and renewables:

Variability in the electricity supply rate:

- Last year, there was a huge spike in natural gas and electricity prices
- NBC historically has locked in a supply rate below the C-06 standard offer (basis for NMC\$) but that is likely to be inverted for the first time in April 2023

Aging and reliability of wind generated renewable resources:

- The Field's Point turbines have performed well but they are aging. NBC must purchase more power if they are off-line or if weather patterns result in lower wind
- The Coventry wind turbines have been periodically off-line and weather patterns can result in lower production which reduces NMCs and REC revenue

Operation of the Bucklin Point Biogas Facility:

- Operational costs unknown including amount of natural gas supplements required

ELECTRICITY

ELECTRICITY PURCHASES AND RENEWABLES

Electricity Purchases ⁽¹⁾		
Primary Uses/Accounts	Annual kWh	Total
Field's Point Wastewater Treatment Facilities and CSO Tunnel Pump Station	19,159,739	
Bucklin Point Wastewater Treatment Facilities	12,162,322	
Interceptor Maintenance	1,163,755	
Corporate Office and Water Quality Science Buildings	1,907,583	
Total Uses		34,393,399
"Behind the Meter Sources"	Annual kWh	Total
Field's Point Wind Turbines (Three 1.5 MW)	7,403,433	
Bucklin Point Biogas Cogeneration Facility	94,327	
Total "Behind the Meter" Production		7,497,760
Net Electricity Purchases		26,895,639
(1) Ties into rate year		

Electricity Expense Variables

USE - flow, rainfall, temperature, biological treatment process (aeration), etc.

BEHIND THE METER PRODUCTION – Variability in wind (warmer weather winds are also generally lighter than the colder denser winter winds), blade repairs, etc.

SUPPLY RATE – World economics and events, weather, natural gas prices, and other factors have impacted electricity prices.

ELECTRICITY

ELECTRICITY EXPENSE AND SUPPLY RATE IMPACT

		FY 2022 Actual	FY 2023 Projected	FY 2024 Rate Case
Electricity	Total Use kWh	34,771,753	34,383,357	34,393,399
Renewables				
"Behind the Meter"				
Field's Point Turbines	Three 1.5 MW Turbines	7,027,707	7,260,825	7,403,433
Bucklin Point Biogas	Cogeneration Facility	38,480	-	94,327
		7,066,187	7,260,825	7,497,760
Net Purchases - kWh		27,705,566	27,122,532	26,895,639
Composite Rate/ kWh (supply/delivery/customer charge)		\$ 0.1413	\$ 0.1916	\$ 0.2573
Total Electricity Expense		\$ 3,914,796	\$ 5,196,677	\$ 6,919,434
Incremental Increase year over year			\$ 1,281,881	\$ 1,722,757
% Increase year over year			133%	133%

Estimated Purchases

Supply Rate increase from
\$0.05956/kWh to \$0.1606/kWh
(on 12/1/22 through 11/30/23)

Annual increase in expense of
\$3.0 million⁽¹⁾ over FY 2022
(test year)

(1) Assumes higher rate entire rate year

ELECTRICITY

ELECTRICITY EXPENSE, BEHIND THE METER PRODUCTION, SUPPLY RATE

Potential Impact of Field's Point Turbine Production Variability (Prior Supply Rate)					
	Annual kWh Production Loss	Increased Electricity Purchase Expense	REC Revenue Loss	Net Annual Financial Impact	Net Monthly Financial Impact
1 Turbine	(2,467,811)	\$ 348,702	\$ (74,034)	\$ 422,736	\$ 35,228
2 Turbines	(4,935,622)	697,403	(148,069)	845,472	70,456
3 Turbines	(7,403,433)	1,046,105	(222,103)	1,268,208	105,684

Potential Impact of Field's Point Turbine Production Variability (New Supply Rate)					
	Annual kWh Production Loss	Increased Electricity Purchase Expense	REC Revenue Loss	Net Annual Financial Impact	Net Monthly Financial Impact
1 Turbine	(2,467,811)	\$ 634,893	\$ (74,034)	\$ 708,927	\$ 59,077
2 Turbines	(4,935,622)	1,269,786	(148,069)	1,417,855	118,155
3 Turbines	(7,403,433)	1,904,679	(222,103)	2,126,782	177,232

Potential Increased Impact Due to Higher Supply Rate					
	Annual kWh Production Loss	Increased Electricity Purchase Expense	REC Revenue Loss	Net Annual Financial Impact	Net Monthly Financial Impact
1 Turbine	(2,467,811)	\$ 286,191	\$ (74,034)	\$ 286,191	\$ 23,849
2 Turbines	(4,935,622)	572,383	(148,069)	572,383	47,699
3 Turbines	(7,403,433)	858,574	(222,103)	858,574	71,548

If NBC's Field's Point turbines are off-line:

1. Increases kWh of electricity that must be purchased
2. More significant impact on expense than previously due to higher supply rates
3. Also reduces REC revenue since fewer RECs may be sold
4. Increased purchases due to turbines being off-line may result in higher demand charges
5. Turbines are anticipated to be off-line to complete blade repair (not reflected in rate year in rate case)

ELECTRICITY

REMOTE NET METERED FACILITIES – NBC-OWNED WIND TURBINES COVENTRY

Summary of NBC Owned Remote Net-Metered Sources			
Three 1.5 MW AC Wind Turbines	Annual Production kWh		
	FY 2022 Actual	FY 2023 Projected	FY 2024 Rate Case
Coventry 1	2,332,920	2,806,048	2,332,920
Coventry 3	1,897,468	2,398,122	3,134,221
Coventry 4	2,501,724	2,438,012	2,501,724
Total Production	6,732,112	7,642,182	7,968,865
		Composite NMC Rate - 1/13/2023 (\$/kWh)	Impact
NMC unit cost times total kWh annual production		\$0.2721	\$2,168,169
NMC Earned			\$2,168,169
Renewable Energy Credit (REC) Sales @ \$30 per REC			\$239,066
		Net Financial Impact \$	2,407,235

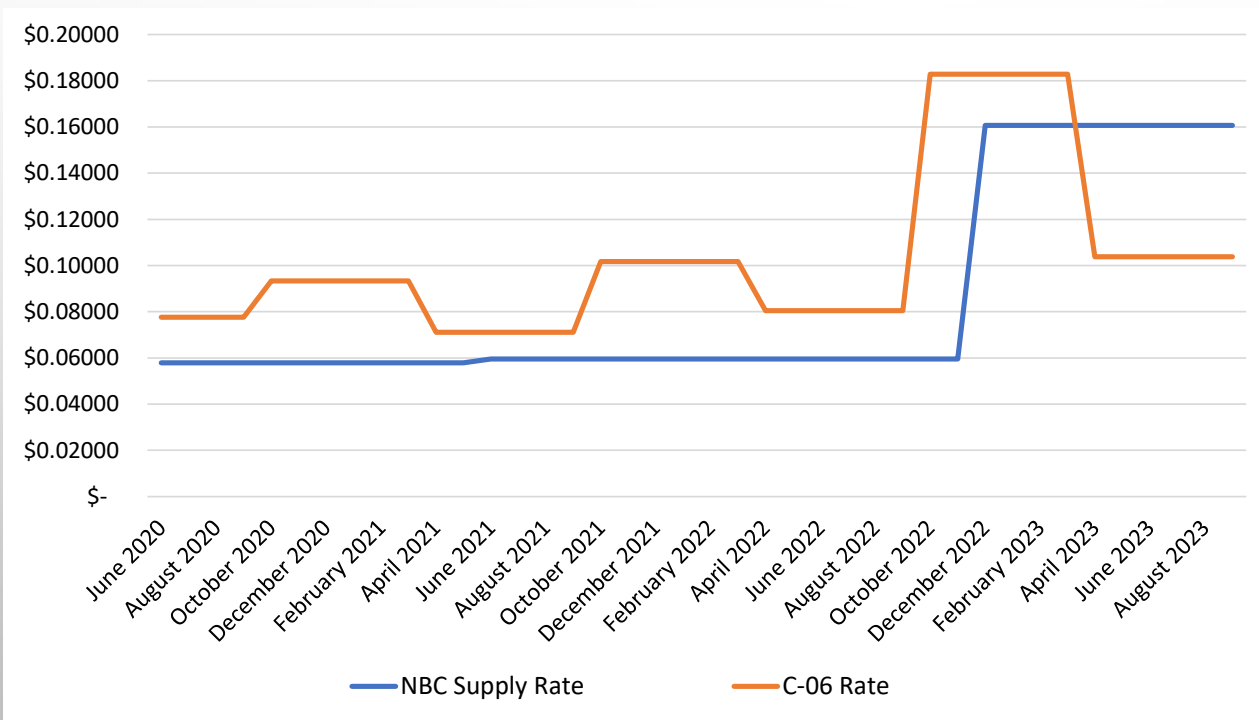
ELECTRICITY

REMOTE NET METERED FACILITIES – POWER PURCHASE AGREEMENTS

Summary of Power Purchase Agreements						
PPA	PPA Signed	Facility	Max Output	% of NMC and RECs to NBC	Expected Annual Generation (kWh)	Guarantee
1	August 28, 2017	2 Solar	4.5 MW AC	100.00%	6,300,000	90% - 3 year average
2	August 28, 2017	Solar	Not able to obtain permits timely			
	Amended 10/28/18	Wind Turbine (Green Hill)	3.0 MW AC	74.60%	5,100,000	90% - 3 year average
	Amended 3/15/22	Solar (GDIM)	9.6005 MW AC	12.43%	2,000,000	
Total Annual kWh					13,400,000	
				Composite NMC Rate - 1/13/2023 (\$/kWh)	Impact	
NMC unit cost times expected total kWh annual production				\$0.2721	\$3,645,872	
Total amount paid to PPA (75% of NMC)				75.00%	\$2,734,404	
NMC retained by NBC					\$911,468	
Renewable Energy Credit (REC) Sales @ \$30 per REC					\$402,000	
Net Financial Impact \$					1,313,468	

ELECTRICITY

NBC SUPPLY RATE VS. NET METERING CREDIT C-06 RATE



- For the first time, NBC’s Supply rate will be higher than the C-06 Rate, increasing “net” electricity expense
- NBC’s rate filing assumed higher C-06 rate in effect at the time of the application

ELECTRICITY

NET METERING CREDITS

<i>NBC NMC Facilities</i>	FY 2022 Actual	FY 2023 Projected	FY 2024 Rate Case	Updated C-06 Rate ⁽¹⁾	Difference due to Rate Change
Net Metering Credits kWh					
Coventry 1	2,332,920	2,806,048	2,332,920	2,332,920	-
Coventry 3	1,897,468	2,398,122	3,134,221	3,134,221	-
Coventry 4	2,501,724	2,438,012	2,501,724	2,501,724	-
Total NBC (54091)	6,732,112	7,642,182	7,968,865	7,968,865	-
Net Metering Credits Earned \$	\$ 1,189,892	\$ 1,732,979	\$ 2,168,169	\$ 1,539,107	\$ (629,062)
Power Purchase Agreement					
Green Hill/Iron Mine	4,893,328	7,410,263	6,893,328	6,893,328	-
K1	2,194,866	2,299,635	2,194,866	2,194,866	-
K2	4,829,499	5,129,693	4,829,499	4,829,499	-
Total Green PPA (54096)	11,917,693	14,839,591	13,917,693	13,917,693	-
Net Metering Credits Earned \$	\$ 2,024,964	\$ 3,365,100	\$ 3,786,726	\$ 2,688,063	\$ (1,098,663)
Net Metering Credits to NBC \$	\$ 506,241	\$ 841,275	\$ 946,681	\$ 672,016	\$ (274,666)
Composite Rate/ kWh	\$ 0.1767	\$ 0.2268	\$ 0.2721	\$ 0.1931	\$ (0.0789)
Total Net Metering Credits Earned	\$ 3,214,856	\$ 5,098,079	\$ 5,954,895	\$ 4,227,170	\$ (1,727,725)
Retained by PPA (Expense)	\$ 1,518,723	\$ 2,523,825	\$ 2,840,044	\$ 2,016,047	\$ (823,997)
Net Change	\$ 1,696,133	\$ 2,574,254	\$ 3,114,850	\$ 2,211,122	\$ (903,728)

Decrease in the C-06 Rate from \$0.18279 (as filed) to \$0.10385 will:

- generate \$1.7 million fewer NMCs
- Reduce PPA “expense” by \$800K
- Result in a net increase in expense of \$903K

⁽¹⁾ Assumes same C-06 rate as proposed 4/1/23 for entire rate year

ELECTRICITY

IMPACT OF COVENTRY REMOTE NET METERED PRODUCTION

Potential Impact of Coventry Turbine Production Variability (Current C-06 Rate)					
	Annual kWh Production Loss	Reduction in NMC (Increased Expense)	REC Revenue Loss	Net Annual Financial Impact	Net Monthly Financial Impact
Coventry 1	(2,332,920)	\$ 634,741	\$ (69,988)	\$ 704,729	\$ 58,727
Coventry 3	(3,134,221)	852,759	(94,027)	946,786	78,899
Coventry 4	(2,501,724)	680,669	(75,052)	755,721	62,977
	(7,968,865)	\$ 2,168,169	\$ (239,066)	\$ 2,407,235	\$ 200,603

If NBC's Coventry turbines are off-line:

1. Reduces NMC earned
2. Reduces REC Revenue
3. Turbines are anticipated to be off-line to complete foundation work. This is not reflected in the rate year in the rate case.

ELECTRICITY

CONCLUSION -

There are many variables out of NBC's control that may significantly impact NBC's cost of service

- *Electricity supply rate*
- *Net Metering Credit Rate (C-06)*
- *Aging and reliability of wind generated renewable resources*
 - *Purchases of electricity*
 - *REC revenue*
 - *NMC production*

ELECTRICITY

CONCLUSION - OPTIONS

1. Reallocation of the Operating Capital included in NBC's rate year cost of service to electricity related expense (\$3.8 million should have been removed as rate year adjustment since it is funded through transfer from the Stabilization Account of the Debt Service Fund to the Project Fund – Restricted Operating Capital Account - OCP).
2. Increase in the Operating Reserve (rate year as filed is \$328,282).
3. Fund the Operation and Maintenance Reserve (OMR) Fund at \$2.5 million from the “carry-over” in the Stabilization Account of the Debt Service Fund.
 - NBC and the Bond Trustee would enter into a supplemental indenture permitting NBC to access the monies in the OMR Fund in the event that NBC is short in the electricity accounts as compared to the approved rate year cost of service. NBC would include a compliance report with the other restricted account reporting.