World Generation X, LLC
(Formerly Fortistar North Tonawanda)

1070 Erie Avenue
North Tonawanda, New York 14120

September 30, 2024

Lisa M. Czechowicz
Regional Permit Administrator
New York State Department of Environmental Conservation

RE: World Generation X, LLC NYDEC ID# 92912000059 Title V Air Permit Renewal
July 26, 2024 & September 24, 2024 – Response Letter

Dear Lisa Czechowicz,

In response to the previous letters dated July 26th and September 24th, 2024, World Generation X LLC (WGX) has outlined its responses below. For clarity and ease of reference, we have listed the department's original questions followed by WGX's corresponding answers.

If you have any questions or concerns, please contact me at the office (716) 694-9874 or cell (716) 570-6365.

Sincerely,

Daniel Rotunno
Plant Manager

Cc: File NT.2.3.1.2.6.1
Michael Emery, NYSDEC Region 9, Regional Engineer
David P. Flynn, Esq.

July 26, 2024

Request for Additional Information
Air Title V Renewal
Permit No. 9-2912-00059/00013

The New York State Department of Environmental Conservation (NYSDEC or DEC) has reviewed the Fortistar North Tonawanda, LLC (Fortistar, facility) response, dated August 25, 2023, but received on September 8, 2023, to NYSDEC's June 12, 2023 Second Notice of Incomplete Application (NOIA). The reply is not adequate, and, therefore, the application is still considered incomplete. Please address the following items:

1. Compliance with the 1-hour NO2 National Ambient Air Quality Standard must be demonstrated via air dispersion modeling. Please submit an AERMOD dispersion modeling protocol to NYSDEC at DAR.meteorology@dec.ny.gov and RAPCE.R9@dec.ny.gov by **August 16, 2024**. Modeling results must be submitted within three weeks of NYSDEC's approval of the protocol.

   WGX Response: *See Attachment A for the "All4 Protocol"*

2. Please submit a completed Methods Used to Determine Compliance form which is required for applications for Title V permits according to the air permit application instructions. This form can be found on NYSDEC's website at https://www.dec.ny.gov/docs/air_pdf/complmethform.pdf.

   WGX Response: *The Methods Used to Determine Compliance form was previously submitted to the agency in a response letter dated September 13, 2024.*

3. Please revise the Climate Leadership and Community Protection Act (CLCPA) analysis, submitted on September 15, 2022, to incorporate the answers in your reply dated August 25, 2023. Additionally, due to the change in ownership since the CLCPA analysis was submitted, please revise the section related to anticipated operation of the facility based on the goals of the current owner. This discussion shall include an expanded response to Item 3 in NYSDEC's Second NOIA, dated June 12, 2023, regarding how often the facility will generate electricity for the grid, how often it will generate electricity for behind the meter usage, and the expected level of facility operations versus historic actual levels.

   WGX Response: *As previously stated, the facility's goal is unchanged. The facility will continue to bid in daily to the NYISO and as market conditions dictate, the facility will be selected to operate. If the facility is not selected to operate in the NYISO market, the facility may operate for behind the meter operation and sell the excess generation back to the grid. We can not accurately depict market conditions going forward. The first two quarters of 2024 had an average capacity factor of 75% more than historical levels. Based on the state's CLCPA, we can not estimate future operations.*

4. Please identify, on a quarterly basis beginning in January 2021, how many days the facility has operated, how many days the facility was called upon by the NYISO to operate, how many days it operated for behind the meter uses, and for each usage, include the MW generated and its usage, hours of operations, and emissions. Please revise upstream emissions based on updated emission factors found in the Appendix: Emission Factors for Use by State Agencies and Applicants of the most recent Statewide Greenhouse Gas Emissions Report. Please indicate the current generating capacity and utilization rate of the facility and the planned future capacity and utilization rate of the facility in the revised CLCPA analysis. In addition, please discuss the portion of the facility's output that will be used for each mode of operation (e.g., electricity generation to the grid vs. on site consumption for blockchain operations) now and in the future.

   WGX Response: *Response was previously submitted to the agency in a response letter dated September 13, 2024.*

5. The response to Item 5 from NYSDEC's Second NOIA, dated June 12, 2023 and regarding CLCPA Section 7(3), needs to be expanded and go into detail as to how the facility plans to minimize emissions and impacts to the community in the future and should provide reasonably specific examples. Additionally, since this project potentially impacts a disadvantaged community, please provide a Disproportionate Burden Analysis following the procedures described in NYSDEC Program Policy DEP 24-1, Permitting and Disadvantaged Communities under the CLCPA. As noted in that policy, the analysis requires calculation of the GHG and co-pollutant emissions from the project and evaluation of their impacts on the disadvantaged community, including information on existing burdens/criteria used to identify the disadvantaged community. The analysis must also discuss any alternatives or design considerations that will be used to reduce the impact of those emissions on the disadvantaged community. Any available relevant material and scientifically reliable resources can be utilized to aid in the development of a disproportionate burden analysis. Some available resources include the criteria report for the DAC, "Technical Documentation on Disadvantaged Community Criteria" and the "Disadvantaged Communities Criteria Fact Sheet." These resources are available at the following website: https://climate.ny.gov/Resources/Disadvantaged-Communities- Criteria.

   WGX Response: *WGX has reviewed the applicable standard and confirms that the facility is not located within or near a potential environmental justice area (PEJA) or a Disadvantaged Community (DAC) as outlined in CLCPA Section 7(3). Figure 1 below highlights the WGX facility at 1070 Erie Avenue in North Tonawanda, Niagara County, New York marked by a red square. The site is located outside the one half-mile radius requirement of a PEJA and DAC. The PEJA is depicted by the grid pattern on the east and southwest of the subject site, while the DAC areas are depicted by purple-marked areas. Since the site is outside the limits of the PEJA and DAC areas, there is no census block data available in the NYSDEC database to obtain residential or other critical data.*

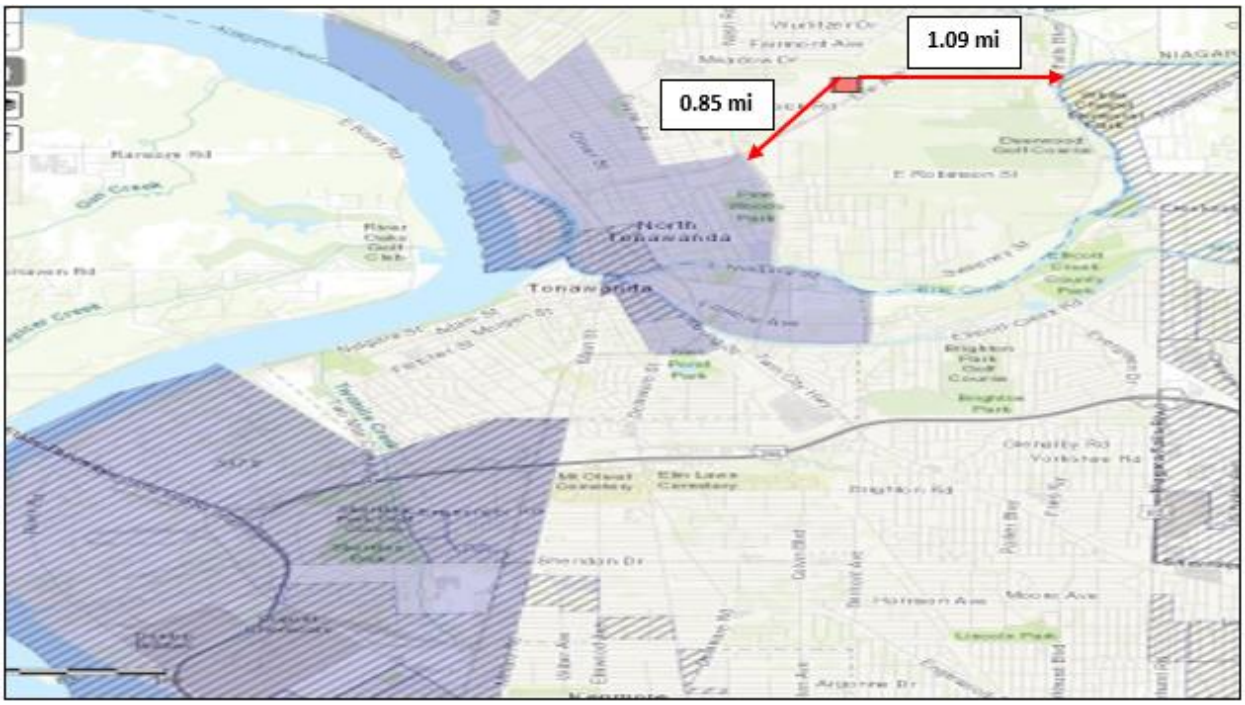

Figure 1. Project Location and Potential Environmental Justice Area(s) and Disadvantaged Communities (DAC).

Additionally, there are two other items that will provide to minimize emissions and provide a positive outcome for the environment and the surround areas. Emission Unit ID U00004 is a Clever Brooks natural gas fired steam boiler that has not been utilized in over 10 years nor will it likely ever be used again under the current operations. Currently the unit is physically disconnected from its fuel source therefore, WGX will be requesting a modification to remove EU00004 from its existing Title V permit as part of the renewal application. Secondly, with the current operations, WGX anticipates a significant decrease in the amount of unit start-ups with Emission Unit ID U00003 (turbine starting diesel generator), which ultimately will reduce air emissions.

6. An enhanced public participation plan (PPP) must be prepared for the project. As noted in DEP 24-1, the development of the PPP should follow the procedural guidance in Section V.D of the Commissioner's Policy on Environmental Justice and Permitting (CP- 29). A PPP template has been included for your reference. Before preparing and submitting the information identified above, please contact the Division of Environmental Permits to arrange a meeting to discuss the applicability of CLCPA and the preparation of the analysis.

   WGX Response: *See Attachment B*

September 24, 2024

Comments on Part 1 of the reply to
RFAI WGX (fka Fortistar North
Tonawanda) Air Title V Renewal
Permit No. 9-2912-00059/00013

The New York State Department of Environmental Conservation (DEC) reviewed Part 1 of WGX's (fka Fortistar North Tonawanda) response dated September 12, 2024, but submitted on September 13, 2024, to DEC's Request for Additional Information (RFAI) dated July 26, 2024 and retransmitted via e-mail to Daniel Rotunno on August 20, 2024. Mr. Rotunno confirmed receipt of this request via e-mail on August 20, 2024.

The reply dated September 12, 2024 states that revisions may be made to the information provided when the final version is submitted on September 30, 2024. Please consider the following when finalizing the response to Item 4:

1. Table B-1 provides greenhouse gas (GHG) emission factors but not actual emissions data as requested in the July 26, 2024 RFAI and as clarified in DEC's September 11, 2024 letter.

   WGX Response: *See Attachment C. Additional tables (Tables B-1 through B-6) were added to reflect actual GHG emissions data, as requested.*

2. The World Generation Operating Data table in Exhibit B, shows that the total run time during the first and second quarters of 2024 were similar, but the total Megawatts (MW) generated was significantly different. For example, the plant ran for about 3% more hours in the 2nd quarter than the 1st quarter, but the plant appears to have generated 138% more MW in the 2nd quarter than the 1st quarter. Please explain the difference and correct the table as appropriate.

   WGX Response: *The total megawatts generated for Q1 2024 and Q2 2024 was corrected. See Attachment D -" World Generation Operating Data".*

ATTACHMENT A

AIR QUALITY MODELING PROTOCOL

NITROGEN DIOXIDE NAAQS EVALUATION

NAES CORPORATION – NORTH TONAWANDA, NY

SEPTEMBER 2024

SUBMITTED BY:

SUBMITTED TO:

NAES Corporation
World Generation X, LLC
1070 Erie Avenue
North Tonawanda, NY 14120

New York State Department of
Environmental Conservation – Region 9
Division of Air Resources
700 Delaware Avenue
Buffalo, NY 14209

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LIST OF APPENDICES

1. INTRODUCTION

NAES Corporation (NAES), in partnership with World Generation X, LLC (WGX), formerly Fortistar North Tonawanda, Inc. operates a cogeneration plant in North Tonawanda, Niagara County, New York (Facility). WGX currently operates the Facility under New York Air Title V Facility operating permit (TVOP) ID 9-2912-00059/00013. The Facility submitted a TVOP renewal application (Application) in 2021 to Region 9 of the New York State Department of Environmental Conservation (NYSDEC).

In a Request for Additional Information issued on July 26, 2024, the NYSDEC has requested that the Facility demonstrate compliance with the 1-hour nitrogen dioxide (NO_2) National Ambient Air Quality Standard (NAAQS) through an AERMOD air quality dispersion modeling analysis (Modeling). As part of the Modeling, an air quality modeling protocol (Protocol), which outlines the Facility's proposed approach to demonstrate compliance with 1-hour NO_2 NAAQS, has been prepared for approval by NYSDEC. Per NYSDEC's request, the Modeling will utilize the American Meteorological Society/EPA Regulatory Model (AERMOD), the U.S. EPA-preferred, refined air dispersion model, as described in this Protocol.

This Protocol has been prepared to present the air quality modeling procedures, in accordance with Division of Air Resources (DAR) "*DAR-10: NYSDEC Guidelines on Dispersion Modeling Procedures for Air Quality Impact Analysis*" (NYSDEC, 2020), that will be used to model predicted ambient concentrations of Facility nitrogen oxides emissions.

2. FACILITY INFORMATION

This section of the Protocol contains a description of the Facility and a description of the geographic and topographic setting of the Facility.

2.1 FACILITY CONTACTS

The Facility and consultant contact information are provided below in Table 2-1.

Table 2-1
Contact Information

Facility Contact Information:	**Facility Address:**	**Air Compliance Consultant:**
Daniel Rotunno Plant Manager 1070 Erie Avenue North Tonawanda, NY 14120 (716) 694-9874 drotunno@naeslcf.com	World Generation X, LLC 1070 Erie Avenue North Tonawanda, NY 14120	Daniel Brese ALL4 LLC (ALL4) 2393 Kimberton Road P.O. Box 299 Kimberton, PA 19442 (610) 422-1108 dbrese@all4inc.com

2.2 REGULATORY SUMMARY AND ATTAINMENT STATUS

The Facility will conduct dispersion Modeling to show compliance with the 1-hour NO_2 NAAQS. Comnpliance with the 1-hour NO_2 NAAQS is determined using the highest five year average of the 98th percentile (eighth high) of the annual distribution of maximum daily 1-hour concentrations predicted at each receptor. The NAAQS for 1-hour NO_2 is set at 188 micorgrams per cubic meter (ug/m^3).

The Facility is located in Erie County, which is classified as in attainment or unclassifiable for all NAAQS including the 1-hour NO_2,NAAQS. While Erie County is in attainment with the 8-hour ozone standard, all counties in New York are located in the Northeast Ozone Transport Region (OTR) and are minimally managed as moderate ozone nonattainment areas.

2.3 FACILITY DESCRIPTION

The equipment identified in Table 2-2 below comprises the Facility's equipment as authorized through the Air Title V Permit:

Table 2-2
Facility Emissions Units

Emissions Unit	Emissions Source	Emissions Source Description	Emissions Point	Status
U-00001	ES00001	55 megawatt (MW) combined cycle gas turbine and heat recovery steam generator	00001	Active
	ES00002	10.5 million British thermal unit per hour (MMBtu/hr) auxiliary boiler		Active
	ES00007	18.82 MMBtu/hr duct burner		Active
	ES00008	18.82 MMBtu/hr duct burner		Active
U-00002	ES00003	10.5 MMBtu/hr emergency generator	00002	Active
U-00003	ES00004	4.3 MMBtu/hr starting motor	00003	Active
U-00004	ES00006	49.5 MMBtu/hr Cleaver-Brooks boiler	00004	Shutdown

The Facility is an electric cogeneration facility with the capability to operate 24 hours per day, seven days per week, 52 weeks per year. The Facility generates steam and electric power using a stationary gas turbine (U-00001 – ES00001), a heat recovery steam generator (HRSG) equipped with two duct burners (U-00001 – ES00007 and ES00008), and a steam turbine generator. The nominal power output for the plant is approximately 63 MW. A small, 10.5 MMBtu/hr auxiliary boiler (U-00001 – ES00002) assists with startup and other Facility needs. A larger standby natural gas-fired steam boiler (U-00004) was previously used to supply heating and other process steam loads when the combustion turbine is off-line but was shutdown prior to the submittal of the Application. NAES will submit an amendment to the Application to

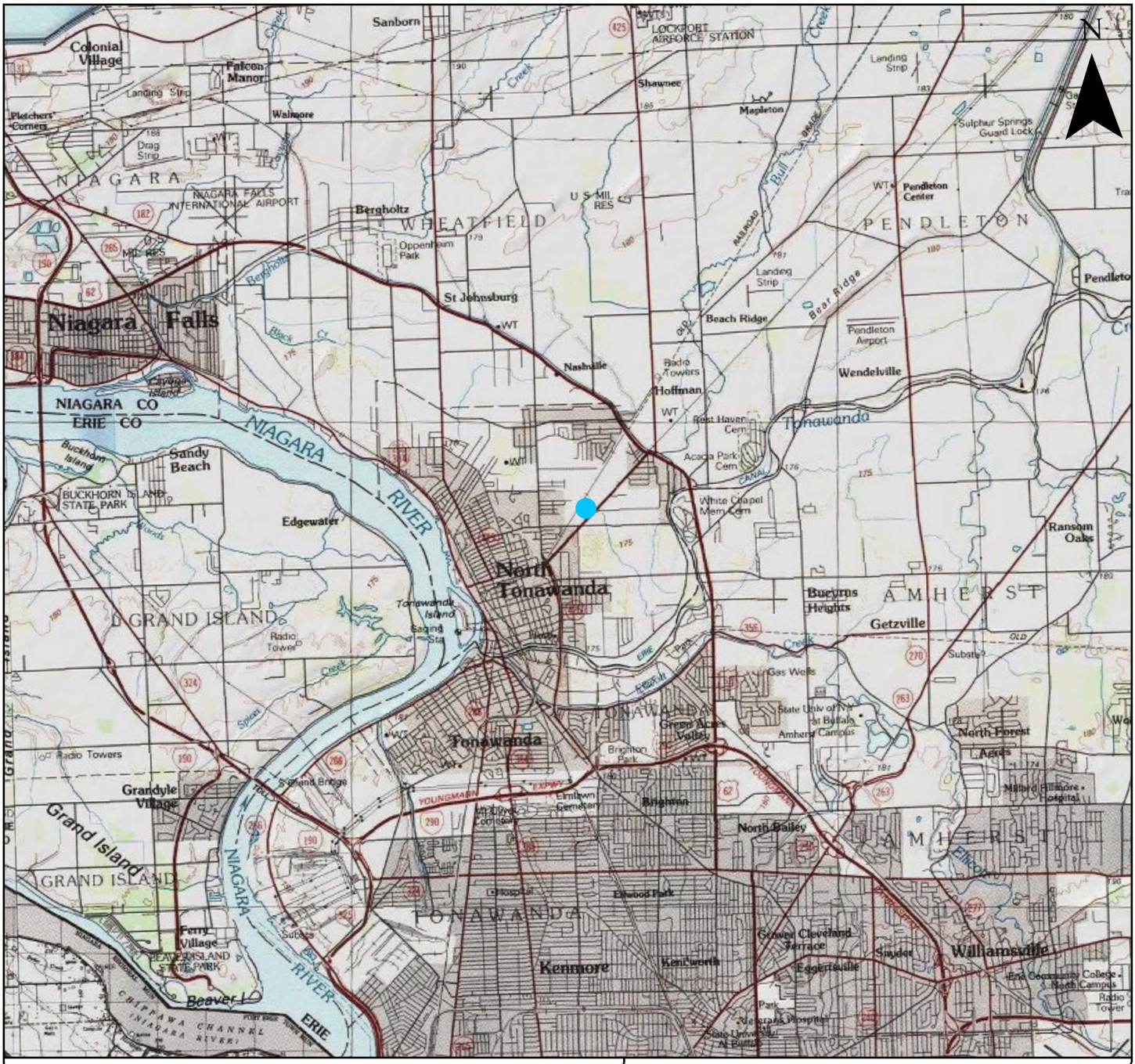
propose the removal of U-00004 from the TVOP. The Facility also has a primary distillate oil-fired emergency generator engine (U-00002 – ES00003) and a secondary distillate oil-fired starting motor (U-00003 – ES00004) used to rotate the gas turbine to a speed at which it can be fired. Natural gas is the primary fuel used at the facility, with distillate oil (e.g., ultra-low sulfur diesel, No. 2 fuel oil, or similar) as the backup for both the gas turbine and the auxiliary startup boiler and as the only fuel for the two distillate oil-fired engines.

2.3 LOCATION AND LAYOUT OF FACILITY

The Facility is located in North Tonawanda, New York in Niagara County, approximately 1.5 kilometers (km) northeast of the center of the city of North Tonawanda. The elevation at the Facility is approximately 170 meters (m) above mean sea level (AMSL). The area surrounding the Facility is predominantly residential and commercial land with moderate relief. A Facility location map and topographic map is provided in Figure 2-1. The geographical coordinates for the approximate center of the Facility are:

- Universal Transverse Mercator (UTM) Easting: 674,810 m
- UTM Northing: 4,768,440 m
- UTM Zone: 17N
- North American Datum (NAD): 1983
- Longitude (degrees, minutes, seconds): 78˚ 51’ 13.2”
- Latitude (degrees, minutes, seconds): 43˚ 02’ 54.7”

The Facility is not located within a designated environmental justice area.



Legend

- Facility Location

Figure 2-1
Facility Location Map

World Generation X, LLC
North Tonawanda, NY

PREPARED BY:	CHECKED BY:
CQ	DB
DATE:	PROJECT NO.:
September 2024	000116-0024

ALL4

3. EMISSIONS INVENTORY SUMMARY

This section presents a summary of the emissions inventory and physical emissions point characteristics that will be used as part of the air quality dispersion modeling analysis.

3.1 FACILITY-WIDE AIR CONTAMINANT EMISSIONS INVENTORY

A summary of potential to emit (PTE) Facility-wide NO_x permitted emissions from combustion units from each Emissions Unit (EU) was developed. A summary of emissions is provided in Table 3-1. Only emissions units with NO_X emissions are included in the Modeling.

Table 3-1
Summary of NO_X Emissions Rates

Emissions Point	Emissions Unit	Emissions Source	Description	Fuel Firing	Operating Load	Emissions Rates	
					(%)	(lb/hr)	(g/s)
00001	U-00001	ES00001/ ES00007/ ES00008	Turbine and duct burners	Natural Gas	100%	45.41	5.7217
00001	U-00001	ES00001/ ES00007/ ES00008	Turbine and duct burners	Natural Gas	80%	36.33	4.5774
00001	U-00001	ES00001/ ES00007/ ES00008	Turbine and duct burners	Distillate Oil	100%	90.82	11.4434
00001	U-00001	ES00002	Auxiliary Boiler	Natural Gas	100%	1.26	0.1588
00001	U-00001	ES00002	Auxiliary Boiler	Distillate Oil	100%	1.96	0.2474

3.2 PHYSICAL SOURCE CHARACTERISTICS

A listing of the physical stack characteristics for EUs at the Facility is provided in Table 3-2. Information related to the physical stack characteristics, which includes unit location, base elevation, release height, stack temperature, stack diameter, and stack exit velocity, is provided.

Table 3-2
Summary of Physical Stack Characteristics

Emissions Point	Emissions Unit	Description	UTM NAD 83 Zone 17		Base Elevation	Stack Height	Exhaust Temp.	Stack Diam.	Exit Velocity
			Easting (m)	Northing (m)	(ft)	(ft)	(deg F)	(ft)	(ft/s)
00001	U-00001	Turbine and duct burners	674,798	4,768,421	570	165	271.0	10.5	74.8
00001	U-00001	Auxiliary Boiler	674,797	4,768,423	570	74	418.9	1.4	29.1

3.3 OPERATING SCENARIOS

Due to the nature of the Facility operations multiple operating scenarios will be evaluated for the modeling. To account for the use of distillate fuel and natural gas in the turbine and auxiliary boiler two operating scenarios for each device will be evaluated (one for each fuel type). Based on Condition 22-2 of the TVOP the Turbine can only run at 100% load while burning distillate oil and 80-100% while burning natural gas. An additional two operating scenarios will be evaluated to account for variation in the Turbine operating loads.

3.4 EXCLUSION OF SOURCES

Based on guidance provided by U.S. EPA in *Additional Clarification Regarding Application of Appendix W Modeling Guidance for the 1-hour NO2 National Ambient Air Quality Standard* from March 1, 2011 (U.S. EPA, 2011), the intermittent sources [i.e., emergency generator (U-00002) and starting motor (U-00003)] will be excluded from the Modeling. The sources have permit limits of 415 hours per year (hrs/yr) for the emergency generator and 200 hrs/yr for the starting motor. In the 2011 memorandum, U.S. EPA noted that the intent of the 1-hour NO_2 standard was to establish a standard that would protect public health, but be reasonably stable from extreme meteorological events. U.S. EPA breaks down the argument to state that the likelihood of the controlling meteorological conditions occurring during the limited operation of these intermittent sources is significantly low. Furthermore, by including intermittent sources in modeling analyses these sources could become the controlling emissions units due to relatively poor dispersion characteristics even though they are not operated on a consistent basis. Therefore, U.S.

EPA has concluded that only those sources that are "*continuous enough or frequent enough to contribute significantly to the annual distribution of daily maximum 1-hour concentrations*" should be included in a modeling demonstration. Given the operating limits for these emissions units, the emergency generator and starting motor would not operate frequently enough to contribute significantly to the annual distribution of daily maximum 1-hour concentrations and are not proposed to be included in the Modeling.

Additionally, the Cleaver Brooks boiler (U-00004) has been shutdown and disconnected from service and will not be included in the Modeling. NAES will be submitting an amendment to the Application proposing to remove the Cleaver Brooks boiler from the TVOP.

4. AIR QUALITY MODELING METHODOLOGY

This section of the Protocol presents the technical approach that will be used to demonstrate compliance with the 1-hour NO_2 NAAQS. The air dispersion model selection is discussed, as well as the options that will be used in the air quality modeling process. Supporting information, such as land use determinations, building downwash analyses, meteorological data, and terrain data, is also presented in this section. The guidance provided in 40 CFR Part 51 Appendix W "*Guideline on Air Quality Models*" (U.S. EPA, 2017) and the "*DAR-10: NYSDEC Guidelines on Dispersion Modeling Procedures for Air Quality Impact Analysis*" (NYSDEC, 2020) (DAR-10) will be used to conduct the Modeling.

4.1 AIR DISPERSION MODEL SELECTION

The AERMOD air dispersion model will be used to predict ambient air concentrations from the Facility. AERMOD is the 40 CFR Part 51 Appendix W air dispersion model approved for regulatory modeling applications. The Facility will utilize the U.S. EPA's regulatory version of AERMOD, current at the time of the analysis (Version 23132).

The AERMOD modeling system consists of two pre-processors and the dispersion model. AERMET is the meteorological pre-processor component and AERMAP is the terrain pre-processor component. The AERMAP pre-processor characterizes the surrounding terrain and generates receptor, building, and source elevations. The AERMET pre-processor is used to generate an hourly profile of the atmosphere and uses a pre-processor, AERSURFACE, to process land use data for determining micrometeorological variables that are inputs to AERMET.

The AERMOD air dispersion model has various user options that must be considered. U.S. EPA has recommended that certain options be selected when performing air quality modeling studies for regulatory purposes. The following regulatory default options will be used in the AERMOD air quality modeling study:

- Stack-Tip Downwash
- Elevated Terrain Effects
- Calms Processing

- No Exponential Decay for Rural Mode
- Missing Data Processing
- Adjust U-star (ADJ_U*)
- Ambient Ratio Method 2 (ARM2) with default minimum and maximum NO_X/NO_2 ratios of 0.5 and 0.9

4.2 LAND USE ANALYSIS

NYSDEC guidance for using a rural or urban dispersion option for air quality modeling was followed utilizing population information for the area surrounding the Facility. The Erie County, Buffalo-Cheektowaga Metropolitan Statistical Area has a population of less than two million people (1,161,192 in 2022 [U.S. Census Reporter, 2022]); therefore, according to NYSDEC guidance, the rural dispersion default option can be used for the AERMOD analysis. Additionally, per DAR-10 all counties outside of the New York City Metropolitan Area are classified as rural with regard to dispersion modeling.

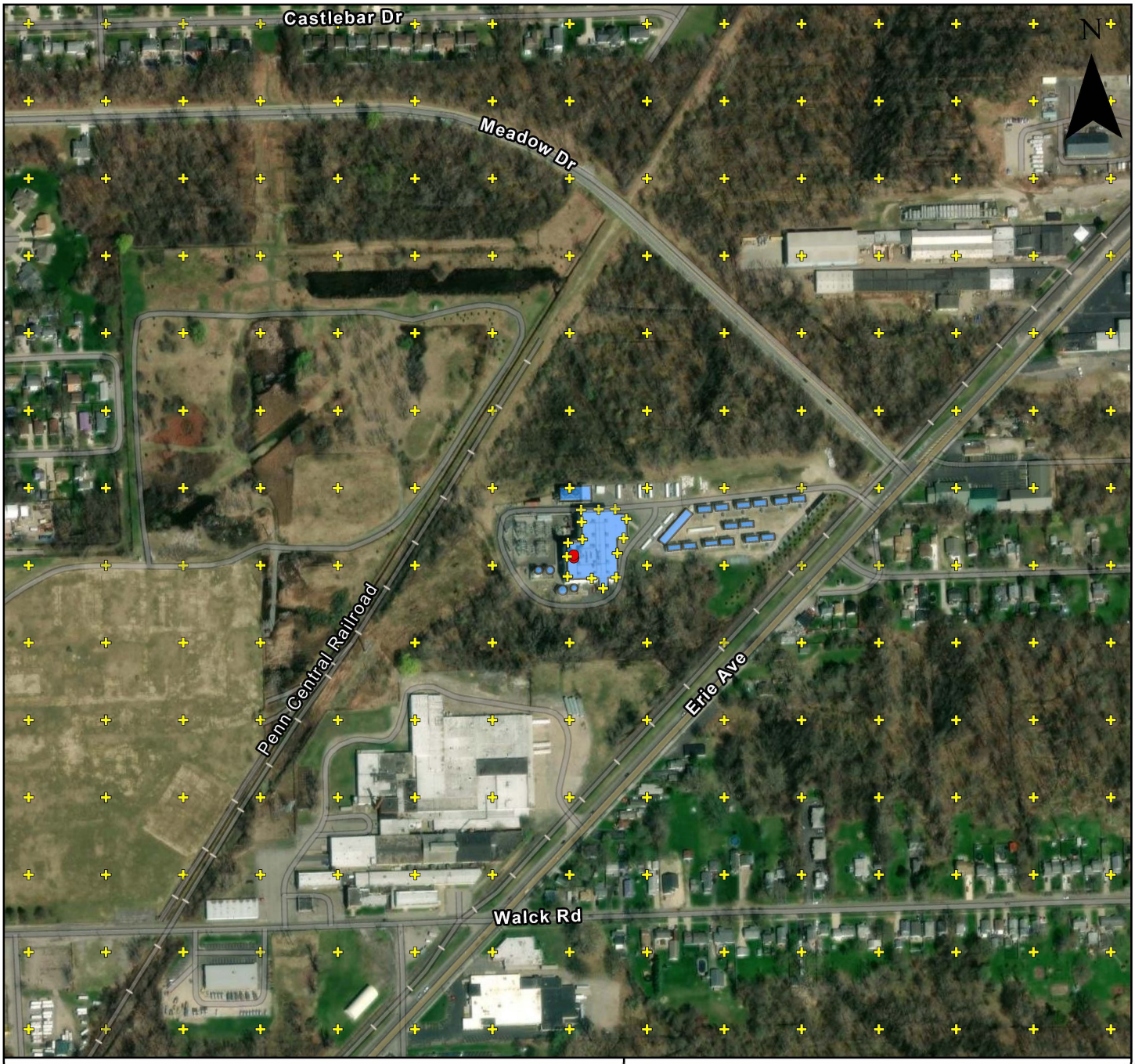
4.3 RECEPTOR GRID

The receptor grid for the AERMOD analysis will cover a 20 km square area that is centered on the Facility. Receptors will be referenced to UTM coordinate system Zone 17N, using NAD 1983. Refer to Figure 4-1 for a map showing the inner receptor grid. Cartesian coordinates will be used to identify each receptor location. Since the Facility does not have sufficient barriers to entry, the ambient air boundary will be set along the Powerhouse building and fenced in transmission equipment. Receptors will be spaced at 25 meters along the ambient boundary. The rectangular receptor grid will have the following grid spacing:

- 70 m out to ± 1 kilometer from the Facility Powerhouse,
- 100 m from 1 kilometer to ± 2 kilometers,
- 250 m from 2 kilometers to ± 5 kilometers, and
- 500 m from 5 kilometers to ± 10 kilometers.

The Facility is located within 10 km of the Canadian border; therefore, the portion of the 20 km square grid that would have extended into Canada will be removed from the Modeling.

Representative terrain elevations will be assigned to all receptors using the AERMAP terrain pre-processor and United States Geological Society (USGS) 1/3 arc-second National Elevation Dataset (NED) files. The horizontal resolution of the NED data is approximately 10 meters in the mid-latitudes.



Legend

- Sources
- Buildings
- Receptors

0 190 380 Meters

Figure 4-1
Inner Receptor Grid

World Generation X, LLC
North Tonawanda, NY

PREPARED BY:	CHECKED BY:
CQ	DB
DATE:	PROJECT NO.:
September 2024	000116-0024

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4.4 METEOROLOGICAL DATA

The meteorological data for the air quality dispersion modeling analysis will consist of five years of surface and upper-air data from January 1, 2019 through December 31, 2023. Surface data from the Niagara International Airport (Weather Bureau Army Navy [WBAN] Station ID 04724) and upper air data from the Buffalo Niagara International Airport National Weather Service (NWS) station (WBAN Station ID 14733) are combined to form a complete dataset. The dataset was processed by NYSDEC with AERMET Version 23132 and has been evaluated by NYSDEC as being representative of most locations in the North Tonawanda area. The dataset provided by NYSDEC represents the most recent version of data available at the time of the analysis.

4.5 GEP STACK HEIGHT ANALYSIS

Facility stacks will be analyzed for the potential influence of building downwash on emissions and resulting ambient concentrations, following guidance contained in the U.S. EPA "*Guideline for Determination of Good Engineering Practice (GEP) Stack Height (Revised)*" (U.S. EPA, 1985). The air quality dispersion modeling analysis will process the most recent version (04274) of the U.S. EPA Building Profile Input Program (BPIP) for PRIME (BPIPPRM), current at the time of the analysis. To perform the building downwash analysis, a Facility plot plan showing the structures, stacks, and property boundary was imported into an AERMOD modeling software and geo-referenced to the Facility location.

4.6 NAAQS BACKGROUND CONCENTRATIONS

Based on DAR-10 guidance, ambient air background concentrations for NO_2 will be incorporated into the NAAQS evaluation. Background air concentrations from the Buffalo Near-Road monitor (AQS Site ID: 36-029-023) are proposed as the most appropriate locations for the evaluation because it is the closest monitoring station and has similar location characteristics. Seasonal, hour-of-day NO_2 background data from NYSDEC may be incorporated as necessary.

5. AIR QUALITY MODELING RESULTS

A detailed air quality modeling report that reflects the NYSDEC-approved Protocol procedures will be submitted. The air quality modeling report will review the procedures that were followed in the air quality modeling analysis and provide model results in tabular format. An electronic copy of the air quality modeling input and output files, as well as supporting files (e.g., meteorological data, building downwash analysis, etc.), will be provided to NYSDEC for review.

6. REFERENCES

NYSDEC 2020 – "DAR-10: Guidelines on Dispersion Modeling Procedures for Air Quality Impact Analysis" New York State Department of Environmental Conservation, DEC Program Policy, September 2022.

Census Reporter – Buffalo-Cheektowaga NY Metro Area, accessed September 26, 2024.
URL: https://censusreporter.org/profiles/31000US15380-buffalo-cheektowaga-ny-metro-area/

U.S. EPA 1985 – "Guideline for Determination of Good Engineering Practice (GEP) Stack Height (Revised)", 1985.

U.S. EPA 2017 – 40 CFR Part 51 Appendix W "Guideline on Air Quality Models", January 2017.

U.S. EPA 2011 – "Additional Clarification Regarding Application of Appendix W Modeling Guidance for the 1-hour NO_2 National Ambient Air Quality Standard", March 1, 2011.

ATTACHMENT B

PUBLIC PARTICIPATION PLAN

Applicant:
Digihost International, Inc.

Facility:
World Generation X, LLC
1070 Erie Avenue
North Tonawanda, NY 14120

NYSDEC Application Number:
9-2912-00059/00016

As Required by:
NYSDEC Commissioner's Policy Guidance CP-29

Submitted to:
New York State Department of Environmental Conservation
700 Delaware Avenue
Buffalo, NY 14209

Prepared by:
NAES Corporation
13 Reads Way
New Castle, DE 19720

Date:
September 30, 20204

TABLE OF CONTENTS

List of Acronyms

Acronym	Definition
CP-29	Commissioner Policy 29, Environmental Justice and Permitting
NOCA	Notice of Complete Application
NYSDEC	New York State Department of Environmental Conservation
PEJA	Potential Environmental Justice Area
PPP	Public Participation Plan

I. INTRODUCTION AND OBJECTIVE

This Public Participation Plan (PPP) has been prepared by World Generation X, LLC (WGX) (hereinafter referred to as "applicant") to fulfill and comply with the requirements of New York State Department of Environmental Conservation **Commissioner Policy 29, Environmental Justice and Permitting (CP-29)** for their proposed renewal of Title V air permit for the WGX facility that requires an air permit to operate a power generation plant. The location of the project been determined by NYSDEC to potentially impact one or more potential environmental justice area (PEJA) (See **Figure 1**). The subject site located at 1070 Erie Avenue in North Tonawanda, NY is designated on the below map as a red block. The map shows two different PEJAs near the subject site and they are depicted in a grid pattern. One PEJA is located on the western banks of the Niagara River and the second PEJA is located on the eastern side of Erie Canal. Both PEJAs are greater than a 1-mile radius away from the subject site. The purple shaded areas are Disadvantaged Communities.

This PPP has been developed in accordance with the procedures established in CP-29 Section V.D and it aims to help ensure meaningful and effective public participation throughout the NYSDEC environmental permit review process. Public participation in the NYSDEC environmental permit review process means a program of activities that provides opportunities for stakeholders to be informed about and involved during the review of a proposed action. The objective of this PPP is to outline and describe the program of activities that the applicant will implement to actively seek and enhance public participation during the application review process.

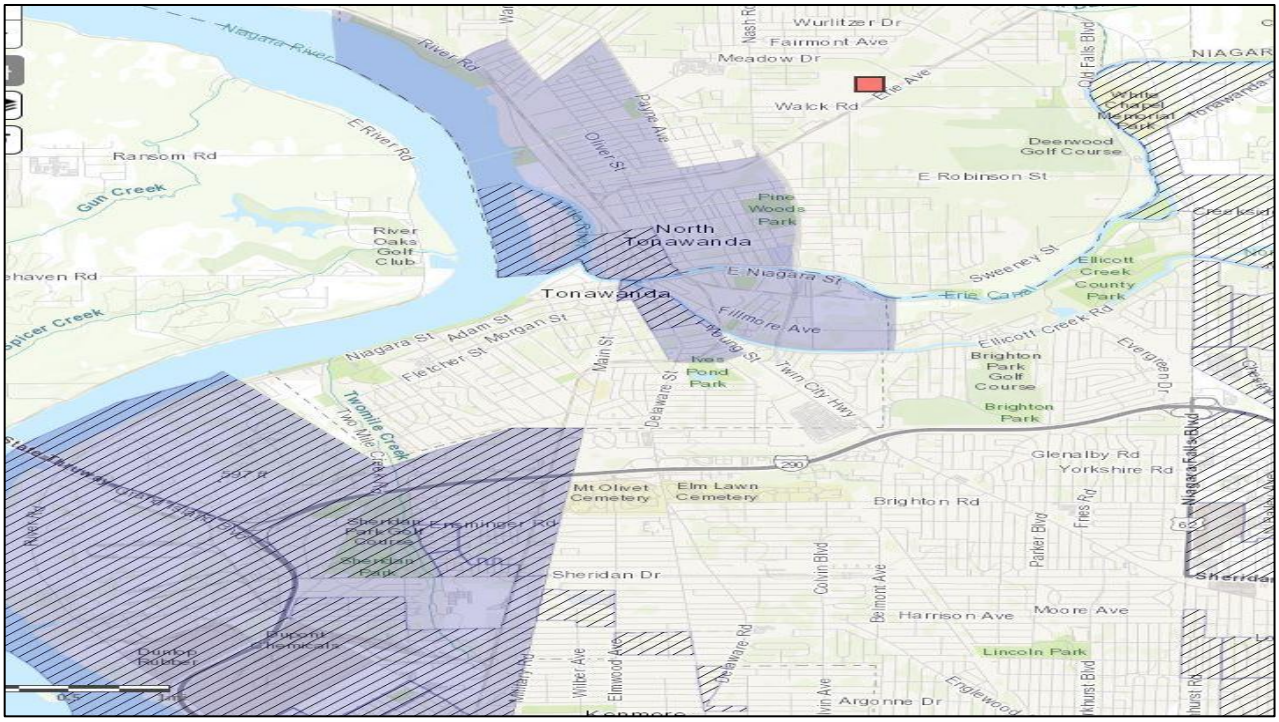

Figure 1. Project Location and Potential Environmental Justice Area(s)

II. PROJECT DESCRIPTION AND PROPOSED ACTION

Project Overview

The WGX facility is located in North Tonawanda, Niagara County, New York. The facility submitted their Title V renewal air permit to New York State Department of Environmental Conservation (NYSDEC) and is waiting for NYSDEC to approve the renewal application. The facility generates steam and electric power using a stationary natural gas turbine, a heat recovery steam generator (HRSG) equipped with two duct burners, and a steam turbine generator. The nominal power output for the plant is approximately 55 megawatts (MW). The facility currently generates electric power for sale to the local utility and for operations behind the meter.

A small auxiliary boiler assists with startup and other plant needs. A larger standby natural gas fired auxiliary boiler is used to supply heating and other process steam loads when the combustion turbine is off-line. The facility also has a primary diesel emergency generator engine and a secondary diesel starting motor used to rotate the gas turbine to a speed at which it can be fired. Natural gas is the primary fuel used at the facility, with No. 2 fuel oil as the backup for both the gas turbine and the auxiliary startup boiler and as the only fuel for the two diesel units.

To implement the proposed project, WGX submitted a Title V renewal air permit application to the New York State Department of Environmental Conservation (NYSDEC) for permit DEC ID# 9-2912-00059/00016.

Nature of Proposed Project/Action and Purpose

WGX applied for the renewal Title V application in 2021 to comply with New York State regulatory thresholds specified in 6NYCRR Part 201 and Titles IV and V of the current air permit. This renewal air permit will allow WGX to provide the local energy market with valuable power to the community and provide power to operations behind the meter. The facility has increased operational time since the application was submitted which will result in increased emissions. Based on operational data from 2022-2023, emissions of CO2, NOx and SO2 increased 31%, 23% and SO2 increased from 200 lbs (0.1 tons) to 400 lbs (0.2 tons), respectfully, however, the facility did not exceed its permit limits under the existing air permit.

Figure 2. [Site Plan]

Potential Impacts

An EJ review is intended to assess if the proposed WGX Title V air permit renewal application would cause disproportionally high and adverse effects on minority and/or low-income populations in close proximity to the subject site. A disproportionately high and adverse impact is one that is 1) predominately borne by minority and/or low-income populations, and 2) is appreciably more severe or greater in magnitude to minority and/or low-income populations than that which will be suffered by non-minority and/or non-low-income populations. The facility is currently not located in a PEJA.

Relocation of Residences or Business/Land Acquisitions – The proposed air permit renewal application will not disrupt or divide any established communities, nor will it require any relocation of local community businesses and residences. The proposed project involves a renewal air permit that has been in existence since 1990's.

Disruption of Local Traffic Patterns – No permanent impacts or disruptions to local traffic patterns are expected with the proposed renewal application. There will be no installation of traffic control devices on existing streets, roads and highways. Periodically, there may be times where a technician will be required to troubleshoot the unit or electrical equipment behind the meter.

Community Disruption (Public Services and Social Conditions) – The proposed renewal application will not affect the availability of public services, transportation, medical, education or utility services.

Maintenance of Existing Natural Growth – There will be no maintenance of existing landscaping or natural growth.

Loss of Community Tax Base – No change to the community tax base is expected.

Economic Activity – The proposed project will not increase or decrease economic growth to the area nor will it result in any long-term economic impacts to the region.

Mitigation - The project is not expected to have any socioeconomic impacts and will result in disproportionately high or adverse impacts to low income and/or minority populations. Subsequently, no mitigation measures are proposed.

III. STAKEHOLDER IDENTIFICATION & CONTACT LIST

A contact list consisting of the names, addresses, phone numbers, or email addresses of stakeholders to the proposed action is provided in **Appendix A**. The contact list includes individuals and organizations with a direct stake in the proposed action and people and individuals and organizations that have expressed interest in the proposed project or similar projects affecting the same neighborhood or community.

To develop a draft contact list, the applicant reached out to residents/neighborhood groups who are near or adjacent to the proposed project and that will be or potentially will be affected by the operation; community boards, community leaders, local community, civic organizations, environmental and business groups.

The current contact list has been developed by identifying stakeholders from the following categories: local government and elected officials; business owners, residents, and occupants; local civic, community, environmental and religious organizations; local news

media; administrator/operator of any school or day care that live, work and/or represent a neighborhood or community within a one half-mile radius of the project area (see **Figure 1** for the project area radius).

The applicant will utilize this contact list to communicate and disseminate information about the proposed project/action and permit application review process to the affected community and stakeholders. At minimum, this includes distribution of the written information and outreach materials described in Section V to inform the community about upcoming public meetings and opportunities for public participation.

The contact list will be reviewed periodically and updated as appropriate throughout the permit application review process. The applicant will update the contact list with any new stakeholders identified during the public meeting or execution of other PPP components. In addition, individuals and organizations will be added to the contact list upon request. Such requests should be submitted to the project liaison identified in Section IV. Other additions to the contact list may be made at the discretion of the applicant or, at the request of the NYSDEC project manager, in consultation with other NYSDEC staff, as appropriate (see **Appendix A** for a contact list of Stakeholders).

IV. PROJECT LIAISON

A representative from the project team will be available during business hours at:

- Dan Rotunno – Plant Manager
- (716) 439-1283
- drotunno@naeslcf.com
- 1070 Erie Avenue
  North Tonawanda, NY 14120

Impacted residents and interested stakeholders can contact the project liaison listed above to provide input to the project team, discuss any issues or concerns and/or to ask questions or request information. The project liaison shall respond in a timely manner and in the manner appropriate to question or information request received. The project liaison will be responsible for tracking and documenting public input, inquires, questions, and information requests received, along with responses provided.

V. PUBLIC OUTREACH ACTIVITIES

The applicant will utilize a range of engagement strategies and conduct various public outreach activities to facilitate participation, involvement, and direct communication with the affected community during the permit application review process. The applicant will implement the public outreach activities outlined below upon finalization and approval of this PPP by NYSDEC.

In compliance with the requirements of CP-29, the applicant will hold public information meeting(s) to keep the public informed about the proposed action and the environmental permit review process. At minimum, the applicant will prepare, distribute and post written information and materials, including a meeting notice and fact sheet, to encourage dialogue and solicit input from interested stakeholders during the permit application review process. Public outreach materials and information will be prepared and presented in an easy-to-read, understandable format, using plan language free of legal terminology, and geared towards a non-technical audience.

The public meeting notice and fact sheet, provided in **Appendix B** and **Appendix C**, will be made available and disseminated in English. In addition, the public can contact the project liaison regarding the availability of language assistance and to request that the notice and fact sheet are translated into another language for comprehension by non-English speaking or limited proficiency stakeholders.

Public Meeting(s)

One (1) virtual public meeting(s) will be conducted to satisfy the intent of CP-29. The meeting will be advertised and virtual.

A meeting is typically required near the end of the permit application review process to inform the public about: the status of, or, if applicable, the availability of, final application materials and draft permits for review; the pending NYSDEC public comment period, and deadline to submit written comments to NYSDEC, if established; and eventual final decision.

Public Meeting: At or Near Completeness

Applicant will facilitate a virtual public meeting or meetings dates and times are to be determined at this moment. Once the renewal application is at or near completion a date and time will be established to:

- Inform the public about the proposed project/action and permit application review status.
- Provide the opportunity to for stakeholders to ask questions and express concerns about the project and identify how to obtain information or answers to questions after the meeting has concluded.
- Inform attendees how they may submit written comments on the permit application to the NYSDEC during the public comment period and, if available, identify any applicable deadlines.

Necessary Meeting Discussion Points and Requirements

All meetings will be facilitated by the applicant and/or representatives from their project team (project personnel) via Zoom. During the meeting, the applicant and/or representatives from their project team will present a brief overview of the project, including

any relevant background information, details on the permitting action, scope of work, schedule, and community impacts. The second part of the meeting will include a question-and answer-portion where the floor will be open for attendees to ask questions, make remarks, and/or express concerns. In addition, the following discussion points will be addressed:

- Provide an update on the permit application review process and identify outstanding application requirements and future milestones in the application review process.
- Make it clear that the meeting is being held prior to NYSDEC's permitting decision for the project/action.
- Identify the location of the online document repository and provide directions on how attendees may obtain and review materials relevant to the application, documents related to the meeting and other public participation plan components.
- Identify and provide contact information for the project liaison and announce procedures for how attendees may obtain answers to questions after the meeting has concluded and interested stakeholders can submit questions, express concerns, or request additional information by telephone, email, and in writing.
- Announce any future outreach, opportunities for public participation, and /or required follow-up with attendees including, but not limited to: additional meetings and future mailings, including, but not limited to the Notice of Complete Application.

Attendance will be recorded during the virtual meeting by sign-in sheets/participant lists, The applicant will track the number of attendees for all meetings held during implementation of this PPP and, where feasible and applicable, identify any affiliation of participants and interests represented at the meeting. In addition, the applicant will be responsible for documenting meeting notes or minutes, along with a record of comments and questions raised in the meeting and respective responses and answers provided. Attendees not identified on the contact list will have the option to be added in the event of future meetings or information sharing.

Virtual Public Meeting Notice Preparation and Distribution

Information regarding the details of the virtual public meeting(s) and how to participate via computer and/or telephone is contained in the reader-friendly meeting notice(s) shown in **Appendix B**. The notice has been prepared in English. Through this notice, the public will be invited and encouraged to attend the public virtual meeting scheduled on a date and time to be determined (TBD).

Once the PPP has been approved by NYSDEC the public meeting notice will be posted and available in the online document repository described in Section VI of this document. At least two weeks in advance of the public virtual meeting, the notice will be published in the Ken-Ton Bee Newspaper which is a daily newspaper printed, published, and circulated daily in Williamsville, NY (Tonawanda area) area. In addition, the public meeting notice will be emailed, mailed and/or hand delivered (door-to-door) to the stakeholders identified in the contact list in **Appendix A** at least two weeks prior to the public virtual meeting.

Fact Sheet Preparation and Distribution

Factual information on the proposed project/action, including an overview, purpose statement, and potential impacts, is outlined in the reader-friendly fact sheet shown in **Appendix C**. In addition, the fact sheet outlines how interested stakeholders can: participate in the permit application review process; access the online document repository to review relevant application materials prior to the public meeting; and contact the project team to obtain additional information. The fact sheet has been prepared in English or TBD.

Once the PPP has been approved by NYSDEC the fact sheet will be posted and available in the online document repository described in Section VI of this document. No later than 2 weeks prior to the public meeting, the applicant will distribute the fact sheet to provide stakeholders with relevant background on the proposed project/action and facilitate meaningful participation during the meeting. The fact sheet will be distributed together with the public meeting notice via email, mail and/or hand delivery (door-to-door).

The fact sheet(s) will also be posted within the vicinity of the project site and visible to the public. For example, they may be posted on some streetlight lampposts or bulletin boards located in the lobby of residential complex buildings or public facilities such as libraries, schools, or community centers within the project site.

Distribution of Notice of Complete Application

Once NYSDEC determines the application(s) for the proposed action/project is complete and provides the Notice of Complete Application (NOCA) to the applicant, the applicant will distribute the NOCA and draft permit, if applicable, to the meeting attendees and any identified interested parties, to provide notification regarding the start of the NYSDEC public comment period and to announce the deadline for submission of written comments to NYSDEC. If the NOCA is available at the time of the meeting, the applicant will distribute the NOCA at the public meeting. If the NOCA is not available at the time of the meeting, the applicant will provide explicit instructions on how to access the online repository and inform the attendees that, once available, the NOCA will be posted to the online document repository and will be distributed to attendees via email or mail as soon as possible, but no later than the date that the NOCA is published by the applicant in the print edition of a paid local newspaper that is circulated at least weekly and available in the municipality in which the project is located.

VI. DOCUMENT REPOSITORY

An online document repository has been established for the community and interested stakeholders to access and review information about the project. The online repository will provide information and documents relating to the project and permit application. This repository will be determined at a later date.

The repository will be updated throughout the application process with project-related information and written materials (i.e., application forms and supporting materials, draft permit, fact sheet, statement of basis (where applicable), the Notice of Complete Application provided by the NYSDEC, etc.).

VII. SUBMISSIONS

Final Summary Report and Written Certification

Upon completion of the enhanced public participation plan, the applicant will submit written certification to NYSDEC to certify that it has fully executed and complied with the approved PPP. The certification shall be signed by the applicant, or the applicant's agent, and submitted to NYSDEC prior to a final decision on the application.

As part of the certification, the applicant shall submit a final summary report documenting the implementation of this PPP. The report will summarize the activities that occurred in accordance with the PPP and will identify any substantive concerns raised by stakeholders during the public meeting, or, at any time throughout the permitting process and detail the applicant's response(s) to any such concerns or questions. The applicant will include, or append, any documentation that supports the final summary report, such as: the meeting sign-in sheet(s), record of attendees/participants, meeting presentation, notes or minutes, summary of questions and answers, and copy of newspaper notice or other proof of publication. In addition, the report will identify any changes or modifications to the proposed project that were made or considered by the applicant to address or reduce concerns surrounding the permit application.

The final summary report and written certification will become part of the application record and will be posted to the online document repository so that it is readily available to the public.

APPENDIX A
Contact List

Appendix A Stakeholders Contact List

North Tonawanda City Hall
216 Payne Ave
North Tonawanda, NY 14120

New York State Department of Environmental Conservation (Region 9)
700 Delaware Ave
Buffalo, NY 14209
(716) 851-7130

North Tonawanda Fire Department
495 Zimmerman St
North Tonawanda, NY 14120

WIVB
2077 Elmwood Ave
Buffalo, NY 14207
Switchboard Phone**:** 716-874-4410

Ken-Ton Newspaper
5564 Main Street
Williamsville, NY 14221
(716) 632-4700

Niagara County Department of Health
Niagara County Courthouse, 175 Hawley Street, 1st Floor,
Lockport, NY 14095-0461
Telephone: (716) 439-7000

DeGraff Medical Park
445 Tremont Street
North Tonawanda, NY 14120
(716) 694-4500

Buffalo Adhesives
960 Erie Avenue
North Tonawanda, NY 14120

Queen City Yard Game Company
800 Walck Rd #20
North Tonawanda, NY 14120

The Grind Tattoo Shop
800 Walck Rd

North Tonawanda, NY 14120

Power Tool & Adhesives
790 Walck Rd
North Tonawanda, NY 14120

Ivy Lea Construction
765 Walck Rd
North Tonawanda, NY 14120

Detailer Dream ® Products
889 Erie Ave #2
North Tonawanda, NY 14120

Body Works
1039 Erie Ave
North Tonawanda, NY 14120

Cricket Tavern
1103 Erie Ave
North Tonawanda, NY 14120

Residential Neighborhood
Walck Road
North Tonawanda, NY 14120

Residential Neighborhood
Sherwood Avenue
North Tonawanda, NY 14120

Strip Mall
Corner of Erie Avenue and Meadow Road
North Tonawanda, NY 14120

APPENDIX B
Virtual Public Meeting Notice
(English Only)

YOU ARE INVITED

Virtual Public Meeting
[DATE] at X:00 pm (TBD)
World Generation X, LLC

Digihost International, Inc. has submitted an application to the New York State Department of Environmental Conservation (NYSDEC) for a renewal air permit DEC# 9-2912-00059/00016. A Public Participation Plan has been developed in accordance with NYSDEC Commissioner Policy 29, Environmental Justice and Permitting (CP-29). The purpose of this meeting is to inform the public about the project and to engage and involve the community early on in the facility renewal air permit application review process.

To Join Online
Click the following link:
[INSERT LINK]

To Call-in Using a Phone
Dial in using the following number:
[INSERT NUMBER]
When prompted, enter the Meeting ID:
[INSERT NUMBER]

Agenda:

- Project Overview
- Background
- Scope of work
- Project schedules
- Community Impacts
- Questions and Answers

Your Attendance is Important!

Project personnel will be available to answer questions from the community. For additional information on the proposed project:

- Contact: Daniel Rotunno by phone at (716) 439-1283 or by email at drotunno@naeslcf.com
- Visit the repository at: [INSERT REPOSITORY LINK]

APPENDIX C
Fact Sheet
(English Only)

DRAFT

World Generation X, LLC Fact Sheet

- **Project:** World Generation X, LLC
- **Applicant:** Digihost International, Inc.
- **Facility:** 1070 Erie Avenue North Tonawanda, NY 14120
- **NYSDEC Application Number:** DEC 9-2912-00059/00016
- **A Public Participation Plan (PPP) has been developed in accordance with NYSDEC Commissioner Policy 29, Environmental Justice and Permitting (CP-29)**

What is the Proposed Project?

The proposed project will be to present the WGX Title V renewal air permit application to the public. To implement the proposed project, Digihost International, Inc. has submitted a renewal application for renewal to the New York State Department of Environmental Conservation (NYSDEC) to operate a power plant that services the electrical grid. The purpose of this fact sheet is to inform the public about its proposed project and to involve the community during the NYSDEC permit application review process.

Why does Digihost International, Inc. need to renewal air permit?

Digihost International, Inc. has submitted a renewal Title V air permit application in order to operate a power plant in North Tonawanda, Niagara County, in the State of New York

How might the project affect the surrounding community?

The site has operated a power plant since the 1990's. This Title V air permit renewal project will not require relocation of residences or business/land acquisitions, disruption of local traffic, community disruption such as public services and social conditions (i.e. public services, transportation, medical, education or utility services), maintenance of existing natural growth, loss of community tax base, economic or mitigation of any socioeconomic impacts and will result in disproportionately high or adverse impacts to low income and/or minority populations. Subsequently, no mitigation measures are proposed.

How can I participate in the permit review process?

- Attend the upcoming virtual public meeting scheduled for [DATE] at [TIME] to learn about the project, ask questions and/or express concerns about the project. **The time and date TBD**.

- Ask questions, express concerns, provide input or submit by comments in writing, by phone or email to the project contact person identified below.

Where can I get more information about the proposed project?

- Visit the online document repository at: [REPOSITORY LINK] to obtain application materials, relevant documents, and information about the project.

- Contact Daniel Rotunno by phone at: (716) 439-1283, by email at: drotunno@naeslcf.com or in writing at: World Generation X, LLC at 1070 Erie Road North Tonawanda, NY 14120 for

information on the project, instructions on how to attend the upcoming virtual public meeting, or to find out about the status of the permit application and public comment period.

Who is responsible for reviewing the Permit Application?

- NYSDEC Region 9 Headquarters, 700 Delaware Avenue, Buffalo, NY 14209 - Region 9 Headquarters (Google Maps) is responsible for reviewing and issuing the required permits. Tel: (716) 851-7130; email: RAPCE.R9@dec.ny.gov

ATTACHMENT C

Table B-1
Greenhouse Gas Calculations - Emissions Factors
WGX (Formerly Fortistar North Tonawanda Cogeneration Plant) - North Tonawanda, NY

Fuel Type	Pollutant	GWP Multiplier 20-year [a]	Combustion [b]		Upstream [c]		Downstream [d][e]		Total Aggregate Emission Factor
			(kg/MMBtu)	(lb/MMBtu) [f]	(g/MMBtu)	(lb/MMBtu) [f]	(g/MMBtu)	(lb/MMBtu) [f]	(lb/MMBtu)
Natural Gas	CO_2	1	53.06	116.98	12,272	27.05	2.36	5.20E-03	**144.04**
	CH_4	84	1.00E-03	2.20E-03	361	0.80	81	0.18	**0.98**
	N_2O	264	1.00E-04	2.20E-04	0.14	3.09E-04	-	-	**5.29E-04**
	CO_2e	-	53.17	117.22	42,661	94.05	6,798	14.99	**226.26**
Diesel/Distillate Oil	CO_2	1	73.96	163.05	14,104	31.09	-	-	**194.14**
	CH_4	84	3.00E-03	6.61E-03	120	0.26	-	-	**0.27**
	N_2O	264	6.00E-04	1.32E-03	0.26	5.73E-04	-	-	**1.90E-03**
	CO_2e	-	74.37	163.96	24,214	53.38	-	15.42	**232.76**

[a] Global warming potentials using GWP20 per 6 NYCRR, Chapter 4, Part 496, Section 5.

[b] Combustion emissions factors for natural gas and No. 2 fuel oil/petroleum products taken from Table C-1 to Subpart C of 40 CFR Part 98 for CO_2 and Table C-2 to Subpart C of 40 CFR Part 98 for CH_4 and N_2O.

[c] Upstream emissions factors from the 2023 NOIA, Table A1.

[d] Downstream emissions factors taken from the 2023 NOIA, Table A3.

[e] A downstream emissions factor for distillate oil was not provided in the 2023 NOIA memo Table A3. This factor was conservatively estimated by scaling the natural gas upstream emissions factor by the ratio of distillate oil to natural gas upstream plus combustion emissions factors.

[f] Calculations completed using the following conversion factors:

Conversion Factors	
453.600	g/lb
1,000	g/kg

Table B-2

Annual Throughput Calculations - Inputs

WGX (Formerly Fortistar North Tonawanda Cogeneration Plant) - North Tonawanda, NY

Annual Throughput Consumption [a]			CT, HRSG, AB & DB	CAT 3512 DITA Emergency Generator	Detroit Diesel 660 HP Starting Motor	Cleaver Brooks Natural Gas-Fired Boiler	Facility Total
Year	Fuel	Units	U00001	U00002	U00003	U00004	
2021	Natural Gas	MMscf	0.48	-	-	0	**0.48**
	Distillate Oil	10^3 gal	0	0.18	6.10E-03	-	**0.19**
2020	Natural Gas	MMscf	0.19	-	-	0	**0.19**
	Distillate Oil	10^3 gal	0	1.74	0.01	-	**1.75**
2019	Natural Gas	MMscf	151.33	-	-	0	**151.33**
	Distillate Oil	10^3 gal	0	3.05	0.02	-	**3.08**
2018	Natural Gas	MMscf	211.19	-	-	0	**211.19**
	Distillate Oil	10^3 gal	0	3.91	0.09	-	**3.99**
2017	Natural Gas	MMscf	98.17	-	-	0	**98.17**
	Distillate Oil	10^3 gal	0	4.34	0.03	-	**4.37**
2016	Natural Gas	MMscf	737.40	-	-	0	**737.40**
	Distillate Oil	10^3 gal	0	4.33	0.21	-	**4.55**
2015	Natural Gas	MMscf	375.39	-	-	0	**375.39**
	Distillate Oil	10^3 gal	0	5.53	0.17	-	**5.70**
2014	Natural Gas	MMscf	356.04	-	-	0	**356.04**
	Distillate Oil	10^3 gal	0	8.93	0.39	-	**9.32**
2013	Natural Gas	MMscf	468.03	-	-	0	**468.03**
	Distillate Oil	10^3 gal	0	7.51	0.40	-	**7.90**
2012	Natural Gas	MMscf	678.52	-	-	0	**678.52**
	Distillate Oil	10^3 gal	0	8.56	0.35	-	**8.91**

[a] Calculations completed using the following information from the tables below:

Source Operational Information				
Emission Source Name	Emission Unit ID	Heat Input Capacity (MMBtu/hr)	Natural Gas (hr/yr)	Distillate Oil (hr/yr) [b]
CT, HRSG, AB & DB	U00001	578.14	8,760	1,440
CAT 3512 DITA Emergency Generator	U00002	10.5	--	415
Detroit Diesel 660 HP Starting Motor	U00003	4.3	--	200
Cleaver Brooks Natural Gas-Fired Boiler	U00004	49.5	8,760	--

Conversion Factors	
1,000	gal/10^3 gal
1,000,000	scf/MMscf

[b] Annual fuel usage limits and hourly operating limits are based on the permitted usage limits for distillate oil for each emissions unit.

Table B-3
Greenhouse Gas Calculations - Historical Emissions
WGX (Formerly Fortistar North Tonawanda Cogeneration Plant) - North Tonawanda, NY

Annual GHG Emissions (tpy) Per Emissions Unit [a][b]																	
Year	U-00001				U-00002				U-00003				U-00004				Total
	CO_2	CH_4	N_2O	CO_2e	CO_2	CH_4	N_2O	CO_2e	CO_2	CH_4	N_2O	CO_2e	CO_2	CH_4	N_2O	CO_2e	CO_2e
2021	35.84	0.24	1.32E-04	56.29	2.45	3.43E-03	2.40E-05	2.94	0.08	1.13E-04	7.92E-07	0.10	0	0	0	0	**59.33**
2020	13.91	0.09	5.11E-05	21.85	23.07	0.03	2.25E-04	27.66	0.14	2.01E-04	1.40E-06	0.17	0	0	0	0	**49.68**
2019	11,257.85	76.33	0.04	17,684.20	40.57	0.06	3.96E-04	48.64	0.32	4.50E-04	3.14E-06	0.39	0	0	0	0	**17,733.23**
2018	15,711.36	106.53	0.06	24,679.93	51.99	0.07	5.08E-04	62.32	1.13	1.58E-03	1.10E-05	1.36	0	0	0	0	**24,743.61**
2017	7,303.33	49.52	0.03	11,472.31	57.73	0.08	5.64E-04	69.21	0.39	5.39E-04	3.77E-06	0.46	0	0	0	0	**11,541.99**
2016	54,858.46	371.97	0.20	86,173.50	57.60	0.08	5.62E-04	69.05	2.85	3.97E-03	2.78E-05	3.41	0	0	0	0	**86,245.96**
2015	27,927.13	189.36	0.10	43,868.86	73.54	0.10	7.18E-04	88.17	2.25	3.14E-03	2.19E-05	2.69	0	0	0	0	**43,959.73**
2014	26,487.00	179.60	0.10	41,606.67	118.81	0.17	1.16E-03	142.44	5.12	7.15E-03	5.00E-05	6.14	0	0	0	0	**41,755.25**
2013	34,818.93	236.09	0.13	54,694.74	99.82	0.14	9.75E-04	119.67	5.25	7.34E-03	5.13E-05	6.30	0	0	0	0	**54,820.71**
2012	50,477.79	342.26	0.19	79,292.20	113.87	0.16	1.11E-03	136.51	4.68	6.54E-03	4.57E-05	5.61	0	0	0	0	**79,434.32**

[a] Calculations completed using the following conversion factors:

Conversion Factors	
1,000	gal/10^3 gal
1,000,000	scf/MMscf
0.001033	MMBtu/scf
0.137	MMBtu/gal
2,000	lb/ton

[b] Calculations use the GHG and CO_2e emissions factors in lb/MMBtu, and the Higher Heating Values provided in Table B-1 and B-2.

Table B-4
Greenhouse Gas Calculations - Proposed Renewal Term - Actual Emissions
WGX (Formerly Fortistar North Tonawanda Cogeneration Plant) - North Tonawanda, NY

Year	Annual GHG Emissions (tpy) Per Emissions Unit [a][b][c]																							Total
	U-00001 - NG				U-00001 - Oil				U-00001				U-00002				U-00003				U-00004			
	CO_2	CH_4	N_2O	CO_2e	CO_2	CH_4	N_2O	CO_2e	CO_2	CH_4	N_2O	CO_2e	CO_2	CH_4	N_2O	CO_2e	CO_2	CH_4	N_2O	CO_2e	CO_2	CH_4	N_2O	CO_2e	CO_2e
2026	274,299.62	1,859.89	1.01	430,879.03	72,733.32	101.59	0.71	87,198.12	347,032.94	1,961.48	1.72	518,077.15	380.69	0.53	3.72E-03	456.40	75.13	0.10	7.34E-04	90.08	0	0	0	0	**518,623.63**
2025	274,299.62	1,859.89	1.01	430,879.03	72,733.32	101.59	0.71	87,198.12	347,032.94	1,961.48	1.72	518,077.15	380.69	0.53	3.72E-03	456.40	75.13	0.10	7.34E-04	90.08	0	0	0	0	**518,623.63**
2024	274,299.62	1,859.89	1.01	430,879.03	72,733.32	101.59	0.71	87,198.12	347,032.94	1,961.48	1.72	518,077.15	380.69	0.53	3.72E-03	456.40	75.13	0.10	7.34E-04	90.08	0	0	0	0	**518,623.63**
2023	274,299.62	1,859.89	1.01	430,879.03	72,733.32	101.59	0.71	87,198.12	347,032.94	1,961.48	1.72	518,077.15	380.69	0.53	3.72E-03	456.40	75.13	0.10	7.34E-04	90.08	0	0	0	0	**518,623.63**
2022	274,299.62	1,859.89	1.01	430,879.03	72,733.32	101.59	0.71	87,198.12	347,032.94	1,961.48	1.72	518,077.15	380.69	0.53	3.72E-03	456.40	75.13	0.10	7.34E-04	90.08	0	0	0	0	**518,623.63**

[a] U-00001 is permitted to combust both natural gas and fuel oil. The anticipated GHG emissions for U-00001 is based on an annul operating capacity of 90%.

[b] The PTE calculations for U-00002, U-00003, and U-00004 are based on an annual operating capacity of 90% of the permitted operating hours for each emissions unit.

[c] Calculations completed using the following conversion factors:

Conversion Factors	
2,000	lb/ton

Table B-5
Greenhouse Gas Calculations - Proposed Renewal Term - Potential Emissions
WGX (Formerly Fortistar North Tonawanda Cogeneration Plant) - North Tonawanda, NY

Annual GHG Emissions (tpy) Per Emissions Unit [a][b][c]																	
Year	U-00001				U-00002				U-00003				U-00004				Total
	CO_2	CH_4	N_2O	CO_2e	CO_2	CH_4	N_2O	CO_2e	CO_2	CH_4	N_2O	CO_2e	CO_2	CH_4	N_2O	CO_2e	CO_2e
2026	385,592.15	2,179.42	1.91	575,641.28	422.99	0.59	4.13E-03	507.12	83.48	0.12	8.15E-04	100.08	31,228.27	211.74	0.11	49,054.41	**625,302.89**
2025	385,592.15	2,179.42	1.91	575,641.28	422.99	0.59	4.13E-03	507.12	83.48	0.12	8.15E-04	100.08	31,228.27	211.74	0.11	49,054.41	**625,302.89**
2024	385,592.15	2,179.42	1.91	575,641.28	422.99	0.59	4.13E-03	507.12	83.48	0.12	8.15E-04	100.08	31,228.27	211.74	0.11	49,054.41	**625,302.89**
2023	385,592.15	2,179.42	1.91	575,641.28	422.99	0.59	4.13E-03	507.12	83.48	0.12	8.15E-04	100.08	31,228.27	211.74	0.11	49,054.41	**625,302.89**
2022	385,592.15	2,179.42	1.91	575,641.28	422.99	0.59	4.13E-03	507.12	83.48	0.12	8.15E-04	100.08	31,228.27	211.74	0.11	49,054.41	**625,302.89**

[a] U-00001 is permitted to combust both natural gas and fuel oil. The maximum PTE for U-00001 is based on the permitted operating limit for the combustion of distillate oil (1,440 hr/yr = 5,900,000 gal/yr) plus the remaining 7,320 hours/year combusting natural gas.

[b] The PTE calculations for U-00002, U-00003, and U-00004 are based on the permitted operating hours for each emissions unit.

[c] Calculations completed using the following conversion factors:

Conversion Factors	
2,000	lb/ton

Table B-6
Greenhouse Gas Calculations - Projected Future Emissions
WGX (Formerly Fortistar North Tonawanda Cogeneration Plant) - North Tonawanda, NY

Annual GHG Emissions (tpy) Per Emissions Unit [a][b][c]																	
Year	U-00001				U-00002				U-00003				U-00004				Total
	CO_2	CH_4	N_2O	CO_2e	CO_2	CH_4	N_2O	CO_2e	CO_2	CH_4	N_2O	CO_2e	CO_2	CH_4	N_2O	CO_2e	CO_2e
2030	347,032.94	1,961.48	1.72	518,077.15	380.69	0.53	3.72E-03	456.40	75.13	0.10	7.34E-04	90.08	0	0	0	0	**518,623.63**
2040	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
2050	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**

[a] U-00001 is permitted to combust both natural gas and fuel oil. The projected GHG emissions for 2030 is based on the average annual GHG emissions for the renewal term of the Permit.

[b] The PTE calculations for U-00002, U-00003, and U-00004 are based on the anticipated GHG emissions for the renewal term of the Permit for each emissions unit.

[c] 2040 and 2050 projected GHG emissions assumes that the Facility will achieve zero-GHG emissions consistent with the requirements of the CLCPA.

ATTACHMENT D

World Generation Operating Data

Date	Schedule Reason	Total Run Hours	Total MW Delivered to Utility	Total MW Delivered to BTM	NOX Mass Tons	CO Mass Tons	SO2 Mass Ton
2021 QTR 1	Utility Operations	12.0	0.0	0.0	0.0	0.0	0.0
2021 QTR 2	No plant operations	0.0	0.0	0.0	0.0	0.0	0.0
2021 QTR 3	Utility Operations	66.6	5062.5	0.0	2.6	1.4	0.0
2021 QTR 4	Utility Operations	3.5	88.3	0.0	0.1	0.0	0.0
2022 QTR 1	Utility Operations	661.6	38498.3	0.0	10.8	7.5	0.1
2022 QTR 2	Utility Operations	52.1	2568.5	0.0	0.3	0.2	0.0
2022 QTR 3	Utility Operations	119.3	5729.5	0.0	1.1	0.6	0.0
2022 QTR 4	Utility Operations	147.6	8304.4	0.0	3.4	1.1	0.0
2023 QTR 1	Utility Operations	66.3	3890.0	0.0	1.3	0.5	0.0
2023 QTR 2	Utility & Behind The Meter Operations	291.7	3081.6	10807.1	4.3	2.7	0.1
2023 QTR 3	Utility & Behind The Meter Operations	523.5	12105.1	13685.7	8.6	4.3	0.1
2023 QTR 4	Utility & Behind The Meter Operations	512.2	5309.2	20628.8	6.6	3.9	0.1
2024 QTR 1	Utility & Behind The Meter Operations	2059.6	22470.6	89283.8	35.2	12.3	0.3
2024 QTR 2	Utility & Behind The Meter Operations	2122.8	20369.2	81752.9	33.6	11.0	0.3

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