



Phase 1 Preliminary Assessment
Environmental Justice
Seneca Compressed Air Energy Storage Project
New York State Electric and Gas

Town of Reading
Schuyler County, New York

Environmental Resources Management
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1.0

INTRODUCTION

This report provides a review and an analysis of potential environmental justice areas that could be affected by the New York State Electric & Gas (NYSEG) compressed air energy storage (CAES) project and identifies existing environmental burden conditions on the area and evaluates additional burden of any significant adverse environmental impact. The review assesses the socioeconomic and demographic conditions of the area surrounding the proposed CAES facility in Schuyler County, New York. Schuyler County is one of 62 counties in New York. Schuyler County's 2010 population of 18,343 makes it one of the least populated counties in the State (U.S. Census Bureau, 2010). This report was prepared for WorleyParsons by ERM and describes the study area investigated, methods and criteria used to evaluate this area, and the findings and conclusions from the evaluation.

The history of environmental justice (EJ) in the United States is frequently traced to the early 1980s. The EJ movement gained strength and greater prominence in 1994 when President Clinton issued Executive Order 12898, "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations" (EO 12898). The Executive Order was designed to focus the attention of federal agencies on human health and environmental conditions in minority communities and low-income communities. This Executive Order was issued to ensure that disproportionately high and adverse human health or environmental effects on minority and low-income populations do not occur. A disproportionate environmental impact occurs when the risk or rate for a minority population or low income population from exposure to an environmental hazard significantly exceeds the risk or rate to the general population and, where available, to another appropriate comparison group.

2.0

METHODOLOGY

In 2002 the State of New York Department of Environmental Conservation (DEC) adopted Commissioner Policy 29 (CP-29), Environmental Justice and Permitting, that provides guidance for incorporating environmental justice concerns into the New York State DEC environmental permit review process, including application of the State Environmental Quality Review Act. It is the general policy of the DEC to promote environmental justice and incorporate measures for achieving environmental justice into its programs, policies, regulations, legislative proposals and activities. CP-

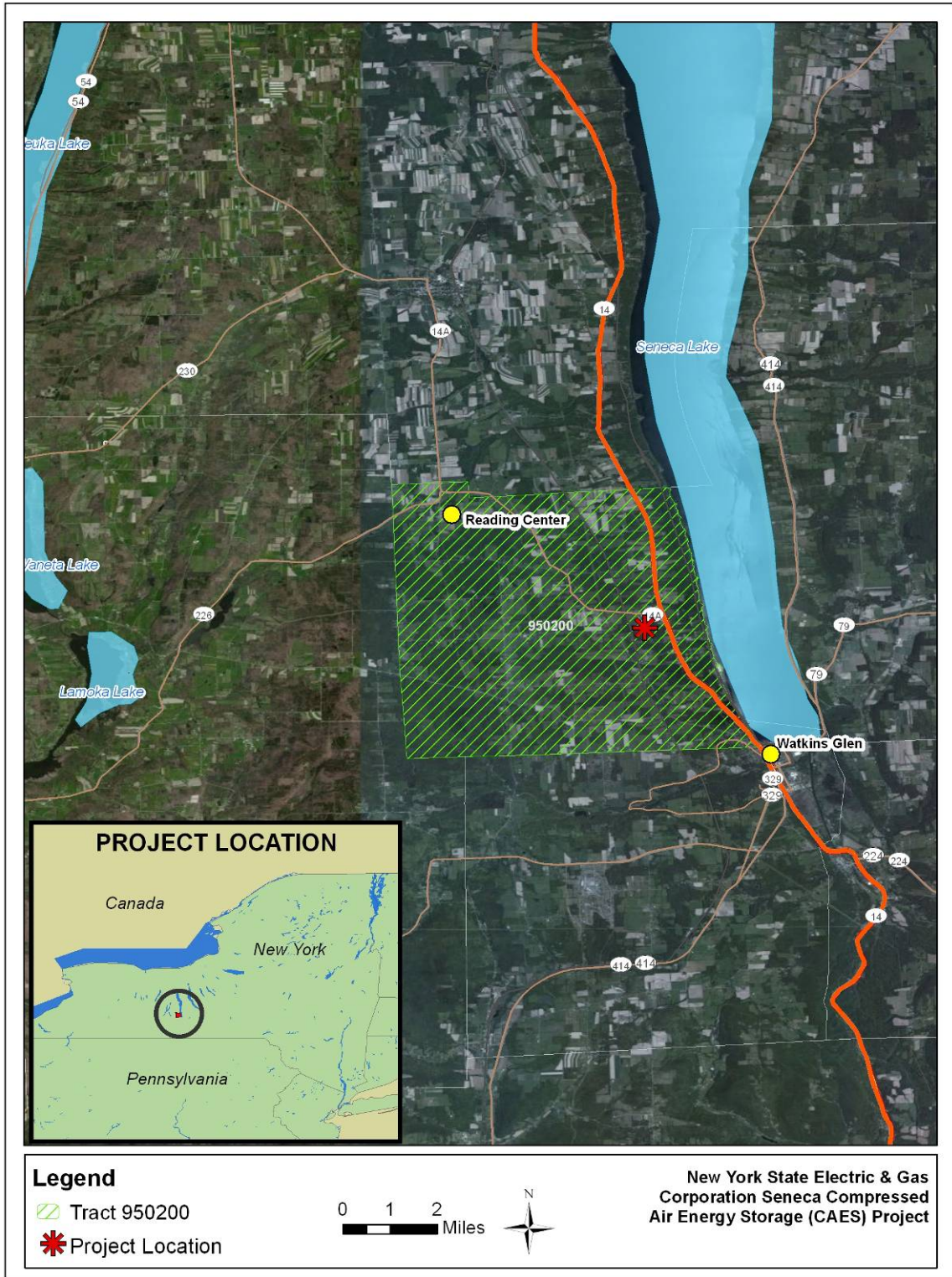
29 is specifically intended to ensure that DEC's environmental permit process promotes environmental justice.

ERM followed the guidance of both DEC and Executive Order (EO) 12898 to evaluate EJ concerns. Both policies require a preliminary screen to identify whether the proposed action is in or near potential environmental justice populations and determine whether potential adverse environmental impacts related to the project are likely to affect any potential environmental justices populations. To make this determination, ERM mapped the proposed site and established an analysis area for the CAES project containing the Census Tract in which the site is located. ERM reviewed census data for the analysis area using two groups of metrics for minority populations and low income populations and concluded that the project site does not fall in a potential environmental justice area.

3.0 PROJECT DESCRIPTION AND LOCATION

The proposed CAES Project is a 130 to 180 MW compressed air energy storage plant that consists of an electrically driven compression cycle and a turbine expansion cycle that will produce electricity. The CAES plant is intended to provide sufficient storage to allow full operation during peak demand time periods in support of transmission system and market needs (approximately 10 hours per day). The CAES Project will be located off State Route 14A, in Reading, Schuyler County, New York. The facility is located west of Seneca Lake in northern Schuyler County (Figure 1).

Figure 1: Project Facility Location



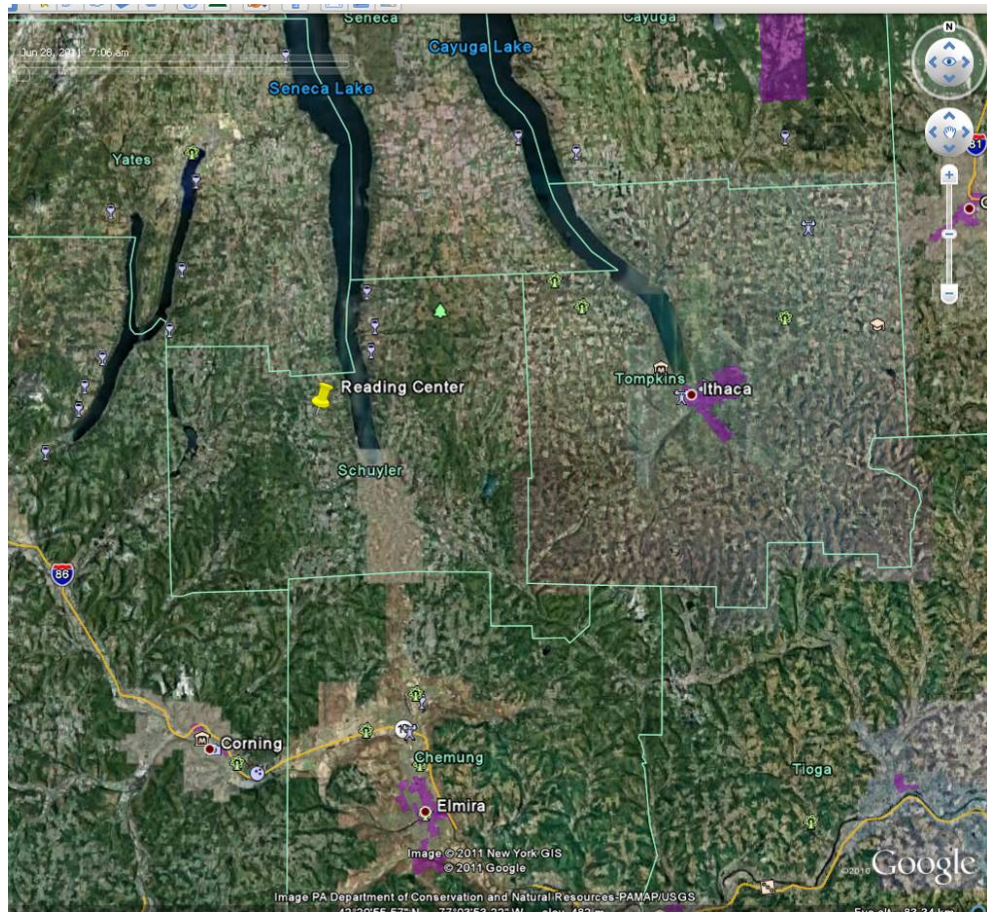
POTENTIAL ENVIRONMENTAL JUSTICE AREAS MAPPING

As established in DEC CP-29 on Environmental Justice and Permitting, potential EJ areas are 2000 U.S. Census block groups of 250 to 500 households each that, in the 2000 Census, had populations that met or exceeded at least one of the following statistical thresholds:

- At least 51.1% of the population in an urban area reported themselves to be members of minority groups; or
- At least 33.8% of the population in a rural area reported themselves to be members of minority groups; or
- At least 23.59% of the population in an urban or rural area had household incomes below the federal poverty level.
- Urban and rural designations for census block groups were established by the U.S. Census Bureau. See CP-29 for more information.

ERM downloaded the GIS data layer of Potential Environmental Justice Areas (PEJAs) from DEC's Google Maps and Earth page in KMZ format to map the area using Google Earth. Figure 2 presents the PEJAs (as purple shaded polygons) in the Schulyer County region of New York. The PEJA areas identified by DEC are located in Ithaca and Elmira, approximately 22 miles east and south of the CAES project site, respectively.

Figure 2: Potential EJ Areas



According to DEC guidance, the census block groups meeting the GIS application thresholds for a potential environmental justice area should fall substantially within the affected area. If no census block group(s) meeting the GIS application thresholds for a potential environmental justice area is identified, the proposed action is not likely to affect a potential environmental justice area and the permit review process may continue independent of the elements of this policy. Because the CAES project site does not fall into one of the defined PEJAs, ERM elected to look at the entire census tract in which the CAES project is located rather than the individual block group in order to provide a more comprehensive analysis.

The CAES project site is located in Schuyler County, New York. Table 1 presents the demographic composition of the census tract in which the project site lies (950200), Schuyler County, and the State of New York for comparison. Table 2 presents a breakdown of ethnicity data into percent and compares Census Tract 950200 (see Figure 1) to Schuyler County and New York State. The analysis area had a minority share significantly lower than 33.8% threshold for rural areas at the time of the 2010 Census. Census Tract 950200 had a 3.5% minority population, or 59 persons out of a total population of 1,707. Comparatively, Schuyler County had a minority population of 2.9% and the State of New York had a minority population of 34.3%. While the census tract had a slightly higher minority population than Schuyler County, it was significantly lower than New York's minority population share.

Based on the data presented in Tables 1 and 2, the CAES project site does not have the potential for Environmental Justice concerns with regard to minority populations. While Census Tract 950200 has a slightly larger percentage of minority population share when compared to Schuyler County, it is still significantly lower than the 33.8% minority share that would raise concern based on DEC guidance.

Table 1 Schuyler County Demographic Composition (Source: US Census Bureau, 2010 Census)

Demographic	New York	Schuyler County	Census Tract 950200
Total population	19,378,102	18,343	1,707
Male	9,377,147	9,122	833
Female	10,000,955	9,221	874
Median Age (years)	38.0	44.2	46.0
Under 5 years	1,155,822	881	79
18 years and over	15,053,173	14,453	1,339
65 years and over	2,617,943	3,116	338
One Race	18,792,253	18,103	1,694
White	12,740,974	17,803	1,648
Black or African American	3,073,800	159	26
American Indian and Alaska Native	106,906	47	7
Asian	1,420,244	53	5
Native Hawaiian and Other Pacific Islander	8,766	4	0
Other	1,441,563	37	8
Two or More Races	585,849	240	13
Hispanic or Latino	3,416,922	234	30

Table 2 Schuyler County Ethnicity Composition (Source: US Census Bureau, 2010 Census)

Area	Non-Hispanic or Latino							
	Population of one Race							
	Pop Total	White	Black	American Indian	Asian	Pacific Islander	Other Race	Hispanic or Latino
Census Tract 950200	1,707	96.5%	1.5%	0.4%	0.3%	0.0%	0.5%	1.8%
Schuyler County	18,343	97.1%	0.9%	0.3%	0.3%	0.0%	0.2%	1.3%
New York	19,378,102	65.7%	15.9%	0.6%	7.3%	0.0%	7.4%	17.6%

The Bureau of the Census measures poverty based on 48 thresholds that vary by age and number of family members. These thresholds do not vary by geographic location; however they are annually adjusted for inflation. Poverty level for Census Tract 950200, Schuyler County, and New York State are presented in Table 3. Based on the metrics identified by the Bureau of the Census, 7.7% of the population in the project area was below the poverty level at the time of the 2000 Census. In comparison, the poverty rate for Schuyler County was slightly higher (11.8%) while New York State had a rate nearly double that of Census Tract 950200 (14.6%). The poverty rate for the project area is lower than that of Schuyler County and the State of New York, leading to the conclusion that there are no Environmental Justice concerns for the CAES project with respect to low-income populations.

Table 3 Poverty Levels in Schuyler County (Source: US Census Bureau, Census 2000)

Area	Total Households	Median Household Income²	Persons Below Poverty Level²
Census Tract 950200	701	\$38,618	7.7%
Schuyler County	7,375	\$36,010	11.8%
New York	7,060,595	\$43,393	14.6%

Based on our review of the socioeconomic and demographic data, development of the CAES project would not result in disproportionately high or adverse impacts to low income populations, or to minority or other identifiable groups. No impacts to environmental justice populations as defined by the applicable policies and regulations are anticipated by the CAES project.

6.0 CONCLUSIONS

The proposed CAES project in Schuyler County, NY does not have the potential for EJ concerns.

6.1 *Minority populations*

The potentially affected area surrounding the proposed CAES project does not exceed the 33.8 percent minority threshold established by DEC for this analysis, and the analysis area's minority population share does not meaningfully exceed the minority population shares of Schuyler County or the State of New York.

6.2 *Low income populations*

There are no environmental justice concerns regarding low income populations in the project area. The analysis reveals that the project area has a poverty rate lower than Schuyler County and significantly lower than New York State and well below the threshold level of 23.59% for populations in urban or rural areas having household incomes below the federal poverty level.

7.0 DEFINITIONS

The following definitions are from the U.S. Bureau of the Census and DEC.

Block group. A block group is a cluster of census blocks having the same first digit of their four-digit identifying numbers within a census tract. For example, block group 3 (BG 3) within a census tract includes all blocks numbered from 3000 to 3999. BGs generally contain between 600 and 3,000 people, with an optimum size of 1,500 people.

Census block. Census blocks are areas bounded on all sides by visible features, such as streets, roads, streams, and railroad tracks, and by invisible boundaries, such as city, town, township, and county limits, property lines, and short, imaginary extensions of streets and roads. Generally, census blocks are small in area; for example, a block bounded by city streets. However, census blocks in sparsely settled areas may contain many square miles of territory. Census block groups generally contain between 250 and 500 housing units.

Census tract. Census tracts are small, relatively permanent statistical subdivisions of a county. Census tracts generally have between 1,500 and 8,000 people, with an optimum size of 4,000 people. When first delineated, census tracts are designed to be relatively homogeneous with respect to population characteristics, economic status, and living conditions. The spatial size of census tracts varies widely depending on the density of settlement. Census tract boundaries are delineated with the intention of being maintained over many decades so that statistical comparisons can be made from census to census. Census tracts are identified by a four-digit basic number and may have a two-digit numeric suffix; for example, 6059.02.

Environmental justice. The fair treatment and meaningful involvement of all people regardless of race, color, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. Fair treatment means that no group of people, including a racial, ethnic, or socioeconomic group, should bear a disproportionate share of the negative environmental consequences resulting from industrial, municipal, and commercial operations or the execution of federal, state, local, and tribal programs and policies.

Family household (Family). A family includes a householder and one or more people living in the same household who are related to the householder by birth, marriage, or adoption. All people in a household who are related to the householder are regarded as members of his or her family. A family household may contain people not related to the householder, but those people are not included as part of the householder's family in census tabulations.

Household. A household includes all the people who occupy a housing unit as their usual place of residence.

Low-income community. A census block group or contiguous area with multiple census block groups, having a low-income population equal to or greater than 23.59% of the total population.

Low-income population. A population having an annual income that is less than the poverty threshold. For purposes of this policy, poverty thresholds are established by the U.S. Census Bureau.

Major project. Any action requiring a permit identified in section 621.2 of title 6 of the Official Compilation of Codes, Rules and Regulations of the State of New York (6 NYCRR Part 621.2), which is not specifically defined as minor.

Minority community. A census block group, or contiguous area with multiple census block groups, having a minority population equal to or greater than 51.1%* in an urban area and 33.8%* in a rural area of the total population.

Minority population. A population that is identified or recognized by the U.S. Census Bureau as Hispanic, African-American or Black, Asian and Pacific Islander or American Indian.

Potential environmental justice area. A minority or low-income community that may bear a disproportionate share of the negative environmental consequences resulting from industrial, municipal, and commercial operations or the execution of federal, state, local, and tribal programs and policies.

Poverty. Following the Office of Management and Budget's (OMB's) Directive 14, the Census Bureau uses a set of money income thresholds that vary by family size and composition to detect who is poor. If the total income for a family or unrelated individual falls below the relevant poverty threshold, then the family or unrelated individual is classified as being "below the poverty level."

Rural. Territory, population, and housing units that are not classified as an urban area. See definition for 'urban area' below. For purposes of this policy, rural classifications are established by the U.S. Census Bureau.

Urban area. All territory, population, and housing units located in urbanized areas and in places of 2,500 or more inhabitants outside of an urbanized area. An urbanized area is a continuously built-up area with a

population of 50,000 or more. For purposes of this policy, urban classifications are established by the U.S. Census Bureau.

8.0 REFERENCES CITED

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Land Use

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