1 EJ Snapshot

The EJ Snapshot is an initial look at the demographics and socioeconomics of a facility's surrounding community area. This includes information within a radius determined by the North Carolina Department of Environmental Quality (Department or DEQ), race and ethnicity (decennial census year), poverty status, per capita income, and Ability to speak English (most current American Community Survey (ACS) census range), the current North Carolina Department of Commerce county tier, and presence of Native American territory. The EJ Snapshot does not include a reconnaissance of the community.

An EJ Snapshot will be conducted at the beginning of the application process when a full EJ Report is requested or to determine the need for a full EJ Report. This will be distributed to interested community members (if known) and posted to the DEQ website with the relevant permit application before the close of the public comment period. The primary goal is to encourage EJ Report comments and suggestions from the surrounding community, industry, and environmental groups throughout the comment period.

It is important to keep in mind, that based on the data available, the following limitations of this study exist: census data is from 2010 and may be outdated; the more recent American Community Survey data through 2017 are estimates; the U.S. EPA's EJSCREEN does not provide all of the data categories that were used in this analysis so the census tract and county data cannot be compared to the radius evaluating the facility boundary; census tracts can be large areas that do not identify exact locations of each population; some of the census tracts slightly overlap with the two-mile radius; and the Department cannot determine which populations are located within that small area of overlap.

The Department has assessed a snapshot of the demographic and socioeconomic data of the communities surrounding the Active Energy Renewable Power facility to foster communication prior to the Division of Air Quality's Public Hearing for the permit application for a new wood pellet trial facility. Based on the results of this Snapshot and public comments received, a full EJ Report may be conducted prior to any final action taken by the Agency.

2   Environmental Justice Evaluation

Environmental justice is the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income, with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies (US EPA). This evaluation examines the demographic and environmental conditions in Robeson County, as well as census tracts, and the two-mile radius around the property boundary of the proposed Active Energy Renewable Power facility. Finally, the demographics of the entire state of North Carolina are also considered as they compare to both the county and local census tract and radius settings.

The Department has assessed the permit application and the potential impact on communities surrounding the requested permit application. Accordingly, the Environmental Justice Snapshot will include:

- Process overview based on the Permit application submitted by Active Energy Renewable Power
- Potential emissions rates
- Study of area demographics [determined by utilizing the US EPA Environmental Justice tool (EJSCREEN) https://ejscreen.epa.gov/mapper/ and current, available census data. http://factfinder.census.gov/faces/nav/jsf/pages/index.xhtml
- Comparison of local area demographics to both county and statewide census data
- County health assessment
- Surrounding sensitive receptors
- Local industrial sites (using the NCDEQ Community Mapping System https://ncdenr.maps.arcgis.com/apps/webappviewer/index.html?id=1eb0fbe2bcfb4cccb3cc212af8a0b8c8).

Demographics (including race and ethnicity, poverty status, and per capita incomes) for Robeson County will be compared to the local (census tracts and project radius) level data to identify any disparities surrounding the project area. Using standard environmental justice guidelines from the EPA and National Environmental Policy Act (NEPA) documentation, the following conditions will be flagged as potential communities of concern:

- 10% or more in comparison to the county or state average

- 50% or more minority

- 5% or more in comparison to the county or state average for poverty

3   Proposed Project

Active Energy Renewable Power submitted a permit application for a new facility located in Lumberton, North Carolina. The facility proposes to process wood chips to produce "black" wood pellets, which are produced by pressurizing chipped wood with steam. The process consists of a 20 mmBtu/hr (million British thermal units per hour) natural gas-fired boiler, a steam-fed pressure cooker with condenser emission control, a screw press, pellet press, and a 4 mmBtu/hr natural gas-fired dryer. There are no emission controls on the screw press, pellet press, and dryer. The cooker process uses steam explosion to separate the cellulosic materials from the hemicellulosic materials and turpene chemicals in the wood, then the resultant solids are formed into pellets.

The Steam Explosion method of wood fiber pretreatment involves exposing the material to saturated steam. The steam temperature and pressure, and the time in the reaction vessel, determines how much of the hemicellulose degrades, and what fraction of the feedstock matter is converted into volatiles and biochemical compounds. The subsequent steam explosion is the rapid release of pressure. This explosive expansion of water in the cell walls of lignocellulosic feedstocks causes a breakdown of the wood fibers into very small particles. The severity of the steam treatment is controlled such that the cellulose and lignin are minimally affected, while the hemicellulose is partially degraded. When compared to white pellets, the resulting material, after densification in a pellet press, has a higher specific energy content measured in gigajoules per cubic meter (GJ/m^3), improved grindability, is hard and produces fewer fines, and its affinity to water is changed from hygroscopic to hydrophobic.

The steam explosion process causes the lignin to emerge on the surface of the fine wood fibers in the form of small beads. When the fiber is densified in the pellet press, these beads form a film-like surface coating of the broken-down wood fibers, and results in hard, highly water-resistant pellets that produce almost no fines.

The water vapor and volatile compounds from the steam explosion process are captured using a condenser. The organic fraction is separated from the water, and sold as a separate product from the pellets. Water is sent to the plant's wastewater treatment facility, then to the Cape Fear River. Solids from the cooker are sent through a screw press to remove excess moisture and organic liquids, then sent to a pellet press to produce the "black" pellets. The pellets are then sent to the dryer to remove any residual moisture and then sent to finished product storage.

Table 1. Facility Emissions Overview

Pollutant	Expected Actual Emissions (tons/yr)	Potential Emissions Before Controls (tons/yr)	Potential Emissions After Controls (tons/yr)
PM	0.05	0.05	0.05
PM_{10}	0.05	0.05	0.05
$PM_{2.5}$	0.05	0.05	0.05
SO_2	0.05	0.05	0.05
NOx	9.41	10.31	10.31
CO	7.91	8.65	8.65
VOC	23.63	49.48	25.87
Highest Individual HAP (Acetaldehyde)	1,479 lbs/yr	1,619 lbs/yr	1,619 lbs/yr
Total HAP	4,963 lbs/yr	5,435 lbs/yr	5,435 lbs/yr

Toxic pollutant emissions from the facility operations are detailed in the table below. There are no toxic pollutant emissions that exceed the toxic air pollutant permitting emissions rates (TPERs). Therefore, no air dispersion modeling demonstration is required. There will be a 02Q .0711 toxics condition in the permit, but there is not a 02D .1100 toxics condition in the permit.

Table 2. Toxic Pollutant Emissions Overview

Pollutant	Expected Actual Emissions After Controls	TPER (02Q .0711(b))	Exceed TPER?
Acetaldehyde	0.074 lb/hr	28.43 lb/hr	No
Acrolein	4.23E-07 lb/hr	0.02 lb/hr	No
Ammonia	0.0752 lb/hr	2.84 lb/hr	No
Benzene	0.433 lb/yr	11.069 lb/yr	No
Benzo(a)pyrene	2.5E-04 lb/yr	3.044 lb/yr	No
Formaldehyde	0.064 lb/hr	0.16 lb/hr	No
n-hexane	0.93 lb/day	46.3 lb/day	No
Toluene	1.8E-04 lb/day	197.96 lb/day	No
	8.0E-05 lb/hr	58.94 lb/hr	No

4 Geographic Area

The proposed facility location is 1885 Alamac Road, Lumberton NC 28358 (Robeson County). The highest off-site ambient air impacts will occur at the plant fence line. Although ambient impacts are expected to be minimal, a two-mile radius was used to evaluate the local demographics and socioeconomics to ensure that the surrounding community was appropriately included. (Figure 1).

February 11, 2020

Active Energy

1:72,224

0   0.5   1   2 mi

0   0.75   1.5   3 km

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus
DS, USDA, USGS, AeroGRID, GN, and the GIS User Community
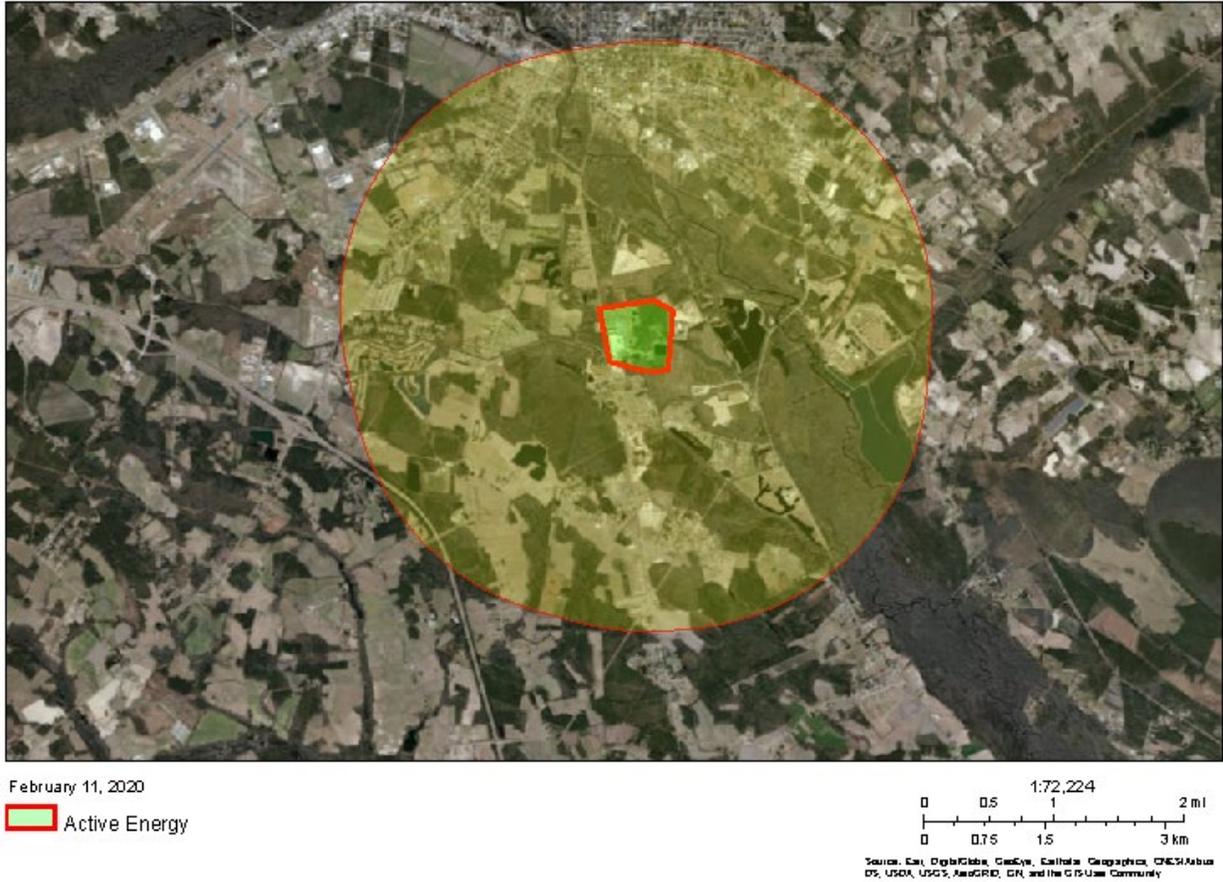
Figure 1. Facility location with two-mile radius.

Regional Setting

Robeson County is designated as a Tier 1 county by the NC Department of Commerce. Tier 1 counties either have less than 12,000 people or have a population with less than 50,000 people and a poverty rate of 19% or greater. The two-mile radius used in this analysis is fully within Robeson County and is encompassed by five census tracts; 9608.01, 9608.02, 9610, 9611 and 9616.01 (Figure 2). The proposed facility location is in Census Tract 9608.02. Census tracts are small, relatively permanent statistical subdivisions of a county with a unique numeric code (US Census Bureau). The census tracts encompass land within the state designated tribal statistical area for the Lumbee tribe.

The Lumbee Tribe is the largest tribe in North Carolina, as well as the largest tribe east of the Mississippi River, and takes their name from the Lumber River. There are over 55,000 members of the Lumbee Tribe, who reside primarily in Robeson, Hoke, Cumberland, and Scotland counties (https://ncadmin.nc.gov/citizens/american-indians/nc-tribal-communities).
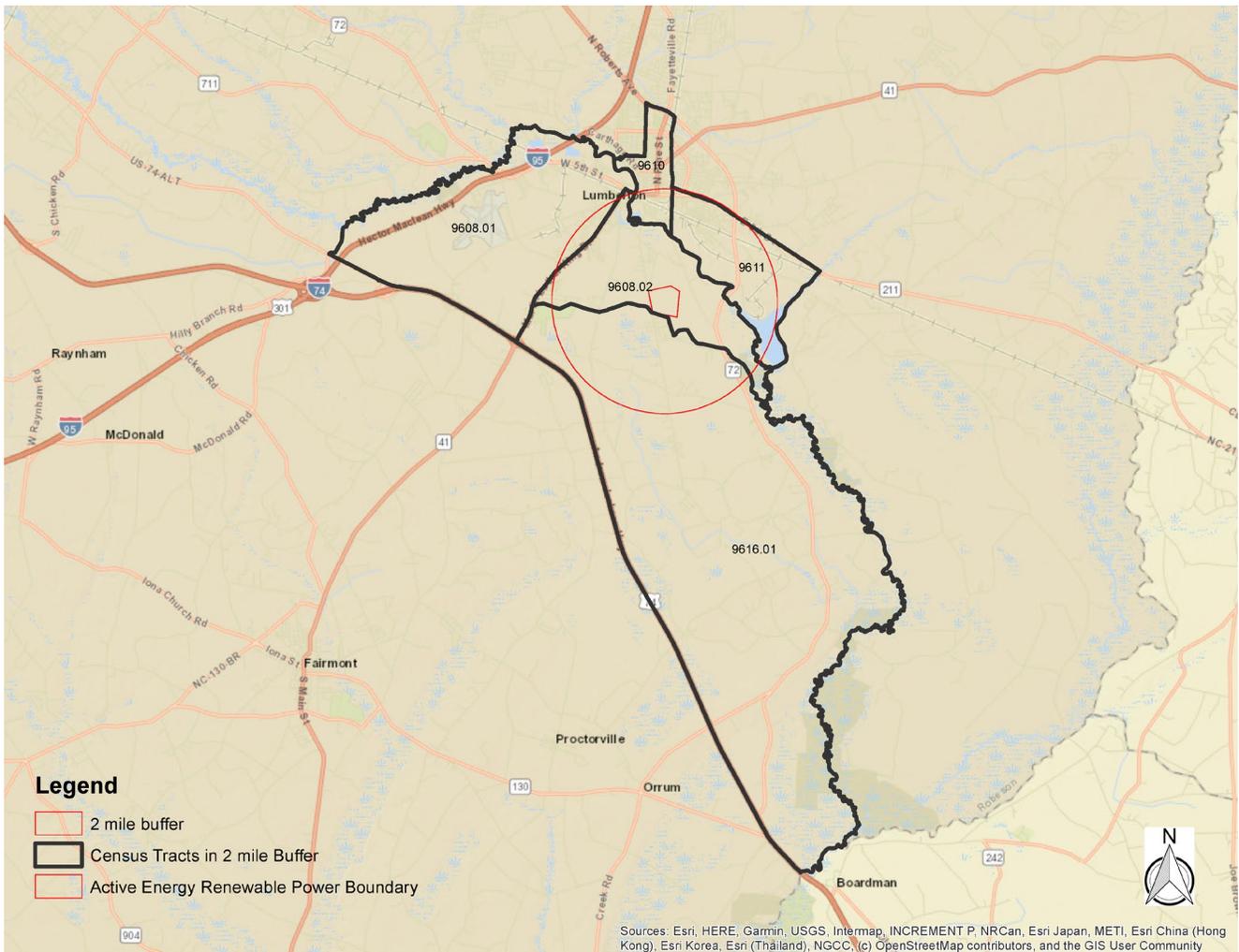
Figure 2. Census tracts surrounding facility location

Table 3. Regional Setting - Race and Ethnicity

Race and Ethnicity	North Carolina		Robeson County	
	Number	Percent	Number	Percent
Total Population	9,535,483	100.0	134,168	100.0
White	6,528,950	68.5	38,877	29.0
Black or African American	2,048,628	21.5	32,637	**24.3**
American Indian or Alaska Native	122,110	1.3	51,502	**38.4**
Asian	208,962	2.2	993	0.7
Native Hawaiian and Other Pacific Islander	6,604	0.1	86	0.1
Some other Race	414,030	4.3	6,672	**5.0**
Two or More Races	206,199	2.2	3,401	**2.5**
HISPANIC OR LATINO (of any race)	800,120	8.4	10,932	8.1
Mexican	486,960	5.1	8,616	**6.4**
Puerto Rican	71,800	0.8	629	0.5
Cuban	18,079	2.3	80	0.1
Other Hispanic or Latino	223,281	2.3	1,607	1.2
Source: US Census Bureau, 2010 Census				
All **bolded and orange** cells indicate a difference that is greater than 10% when compared to the State				

Table 4. Local Setting – Race and Ethnicity

Race and Ethnicity	Project Area - 2 Miles		Census Tract 9608.01		Census Tract 9608.02		Census Tract 9610		Census Tract 9611		Census Tract 9616.01	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Total Population	8,015	100	4,529	100	1,971	100	2,147	100	2,050	100	3,856	100
White	2,024	25	576	12.7	168	8.5	1,037	48.3	865	42.2	2,254	58.5
Black or African American	4,503	**56**	2,859	**63.1**	1,542	**78.2**	586	**27.3**	653	**31.6**	829	21.5
American Indian or Alaska Native	1,042	**13**	901	**19.9**	213	**10.8**	256	**11.9**	325	**15.9**	645	**16.7**
Asian	49	1	12	0.3	3	0.2	92	**4.3**	20	1.0	13	0.3
Native Hawaiian and Other Pacific Islander	9	-	1	0.0	1	0.1	11	**0.5**	7	**0.3**	-	0.0
Some other Race	191	2	91	2.0	17	0.9	111	**5.2**	112	**5.5**	28	0.7
Two or More Races	198	2	89	2.0	27	1.4	54	**2.5**	68	**3.3**	87	2.3
HISPANIC OR LATINO (of any race)	399	5	192	4.2	47	2.4	155	7.2	225	11.0	89	2.3
Mexican			53	1.2	23	1.2	89	4.1	148	**7.2**	55	1.4
Puerto Rican			25	0.6	18	0.9	10	0.5	13	0.6	29	0.8
Cuban			1	0.0	-	0.0	1	0.0	2	0.1	-	0.0
Other Hispanic or Latino			113	**2.5**	6	0.3	55	**2.6**	62	**3.0**	5	0.1

Source: US Census Bureau, 2010 Census
All **bolded** and orange highlighted cells indicate a difference that is greater than 10% when compared to the State
All **bolded** and blue highlighted cells indicate a difference that is greater than 10% when compared to the County and State.

Table 5. Poverty Status – Regional Setting

Subject	North Carolina						Robeson County					
	Total		Below poverty level		Percent below poverty level		Total		Below poverty level		Percent below poverty level	
	Estimate	Margin of Error +/-	Estimate	Margin of Error +/-	Estimate	Margin of Error +/-	Estimate	Margin of Error +/-	Estimate	Margin of Error +/-	Estimate	Margin of Error +/-
Population for whom poverty status is determined	9,783,738	1,751	1,579,871	17,833	16.10	0.2	130,706	623	38,182	1,667	**29.20**	1.30
AGE						0.4						
Under 18	2,256,186	1,865	516,821	9,185	22.90	0.6	33,707	183	14,202	758	**42.10**	2.20
18 to 64	6,053,546	1,090	923,859	9,663	15.30	0.2	79,155	598	20,769	1,062	**26.20**	1.30
65 years and over	1,474,006	881	139,191	2,754	9.40	0.2	17,844	239	3,211	256	**18.00**	1.40
SEX												
Male	4,733,269	2,259	694,126	9,539	14.70	0.2	62,722	282	17,208	921	**27.40**	1.40
Female	5,050,469	2,443	885,745	10,217	17.50	0.2	67,984	419	20,974	928	**30.90**	1.30
RACE AND HISPANIC OR LATINO ORIGIN												
White	6,766,691	7,591	845,573	13,639	12.50	0.2	37,263	839	7,741	781	**20.80**	1.90
Black or African American	2,077,559	4,736	517,071	8,162	24.90	0.4	30,958	373	11,351	661	**36.70**	2.00
American Indian and Alaska Native	114,751	1,804	30,017	1,757	26.20	1.5	51,937	468	14,967	1,079	**28.80**	2.00
Asian	262,596	1,970	33,282	2,248	12.70	0.9	874	55	284	123	**32.50**	13.80
Native Hawaiian and Other Pacific Islander	5,886	537	1,097	297	18.60	4.9	55	50	-	28	0.00	40.00
Some other Race	305,431	7,334	97,609	5,276	32.00	1.4	6,516	730	2,971	621	**44.10**	7.40
Two or more races	240,824	5,455	55,222	2,570	22.90	1	3,103	495	968	258	**31.20**	6.40
Hispanic or Latino	894,810	1,312	268,985	7,035	30.10	0.8	11,197	83	4,653	526	**41.60**	4.70
All individuals below:												
50 percent of poverty level	688,118	10,757					17,199	1,351				
125 percent of poverty level	2,094,292	20,441					48,025	1,615				
150 percent of poverty level	2,596,452	22,139					56,948	1,637				
185 percent of poverty level	3,291,075	23,713					68,119	1,805				
200 percent of poverty level	3,571,557	25,056					72,223	1,891				

Source: US Census, ACS 5-year Estimates 2013-2017. All **orange and bolded** cells indicate a difference of greater than 5% increase when compared to the state.

Table 6. Poverty Status – Local Setting

Subject	Census Tract 9608.01						Census Tract 9608.02					
	Total		Below poverty level		Percent below poverty level		Total		Below poverty level		Percent below poverty level	
	Estimate	Margin of Error +/-	Estimate	Margin of Error +/-	Estimate	Margin of Error +/-	Estimate	Margin of Error +/-	Estimate	Margin of Error +/-	Estimate	Margin of Error +/-
Population for whom poverty status is determined	3,331	314	1874	287	**56.30**	7.3	1678	187	692	146	**41.2**	7.5
AGE												
Under 18	1,075	172	829	164	**77.10**	8.9	532	100	313	89	**58.8**	12
18 to 64	1,884	219	956	192	**50.70**	8.6	919	110	337	74	**36.7**	7.3
65 years and over	372	95	89	50	**23.90**	11.8	227	41	42	22	**18.5**	9.8
SEX												
Male	1,450	199	839	185	**57.90**	9.3	811	100	301	78	**37.1**	9
Female	1,881	199	1035	162	**55.00**	7.6	867	122	391	96	**45.1**	8.6
RACE AND HISPANIC OR LATINO ORIGIN												
White	276	137	158	112	**57.2**	23.6	146	52	44	22	**30.1**	13.5
Black or African American	2,332	296	1269	259	**54.4**	10.0	1330	169	556	139	**41.8**	8.8
American Indian and Alaska Native	663	160	387	139	**58.4**	15.7	122	57	84	54	**68.9**	23.9
Asian	18	24	18	24	**100**	69.90	8	13	8	13	**100.0**	100.0
Native Hawaiian and Other Pacific Islander	0	12	0	12	0	0	0	12	0	12	0.0	0.0
Some other Race	1	3	1	3	**100.0**	100.0	57	64	0	12	0.0	39.3
Two or more races	41	46	41	46	**100.0**	43.6	15	21	0	12	0.0	76.6
Hispanic or Latino	91	121	89	121	**97.8**	6.6	57	64	0	12	0.0	39.3
All individuals below:												
50 percent of poverty level	1,083	228					254	91				
125 percent of poverty level	2,141	301					831	156				
150 percent of poverty level	2,439	323					912	156				
185 percent of poverty level	2,652	304					1079	189				
200 percent of poverty level	2,656	303					1108	188				

Source: US Census, 2013-2017 ACS 5-Year Estimates. All **bolded** and orange highlighted cells indicate a difference that is greater than 10% when compared to the State
All **bolded** and blue highlighted cells indicate a difference that is greater than 10% when compared to the County and State

Subject	Census Tract 9610						Census Tract 9611					
	Total		Below poverty level		Percent below poverty level		Total		Below poverty level		Percent below poverty level	
	Estimate	Margin of Error +/-	Estimate	Margin of Error +/-	Estimate	Margin of Error +/-	Estimate	Margin of Error +/-	Estimate	Margin of Error +/-	Estimate	Margin of Error +/-
Population for whom poverty status is determined	2066	215	704	175	**34.1**	6.8	2025	186	931	212	**46**	8.1
AGE												
Under 18	445	99	197	78	**44.3**	14.4	638	112	416	119	**65.2**	11.8
18 to 64	1338	150	459	120	**34.3**	7.1	1208	132	468	123	**38.7**	8.4
65 years and over	283	49	48	26	**17**	7.9	179	32	47	21	**26.3**	10.8
SEX												
Male	1082	130	323	95	**29.9**	7.4	1026	113	445	105	**43.4**	8.6
Female	984	130	381	94	**38.7**	7.3	999	125	486	129	**48.6**	8.6
RACE AND HISPANIC OR LATINO ORIGIN												
White	1032	189	301	135	**29.2**	9.9	733	128	319	121	**43.5**	13.1
Black or African American	563	128	152	76	**27.0**	10.4	657	136	412	133	**62.7**	12.3
American Indian and Alaska Native	317	115	144	93	**45.4**	19.3	316	102	83	42	26.3	10.8
Asian	14	16	11	15	**78.6**	45.4	8	12	0	12	0.0	100.0
Native Hawaiian and Other Pacific Islander	0	12	0	12	0.0	0.0	0	12	0	12	0.0	0.0
Some other Race	106	57	71	48	**69.0**	25.5	236	110	117	95	**49.6**	28.2
Two or more races	34	30	25	25	**73.5**	38.1	75	81	0	12	0.0	33.5
Hispanic or Latino	166	99	64	53	**38.6**	28.7	332	126	169	111	**50.9**	23.1
All individuals below:												
50 percent of poverty level	189	78					318	109				
125 percent of poverty level	818	182					1065	201				
150 percent of poverty level	1047	215					1217	191				
185 percent of poverty level	1108	222					1399	212				
200 percent of poverty level	1177	219					1404	210				

Source: US Census, 2013-2017 ACS 5-Year Estimates. All **bolded** and orange highlighted cells indicate a difference that is greater than 10% when compared to the State
All **bolded** and blue highlighted cells indicate a difference that is greater than 10% when compared to the County and State

| Subject | Census Tract 9616.01 | | | | | |
| | Total | | Below poverty level | | Percent below poverty level | |
	Estimate	Margin of Error +/-	Estimate	Margin of Error +/-	Estimate	Margin of Error +/-
Population for whom poverty status is determined	3,736	358	1,110	315	**29.70**	8.00
AGE						
Under 18	1,059	212	450	191	**42.50**	15.60
18 to 64	2,169	224	538	152	**24.80**	7.00
65 years and over	508	77	122	61	**24.00**	11.90
SEX						
Male	1,768	213	498	172	**28.20**	9.10
Female	1,968	215	612	179	**31.10**	8.40
RACE AND HISPANIC OR LATINO ORIGIN						
White	1898	250	479	168	**25.2**	7.6
Black or African American	968	206	218	135	22.5	13.6
American Indian and Alaska Native	628	238	312	163	**49.7**	21.4
Asian	0	12	0	12	0.0	0.0
Native Hawaiian and Other Pacific Islander	0	12	0	12	0.0	0.0
Some other Race	213	165	101	105	**47.4**	35.9
Two or more races	29	37	0	12	0.0	55.1
Hispanic or Latino	310	209	101	105	32.6	33.3
All individuals below:						
50 percent of poverty level	552	228				
125 percent of poverty level	1,544	365				
150 percent of poverty level	1,702	358				
185 percent of poverty level	2,145	369				
200 percent of poverty level	2,225	375				

Source: US Census, 2013-2017 ACS 5-Year Estimates.
All **bolded** and orange highlighted cells indicate a difference that is greater than 10% when compared to the State
All **bolded** and blue highlighted cells indicate a difference that is greater than 10% when compared to the County and State

Table 7. Per Capita Income

Location	Subject		Per Capita Income in Last 12 Months (Dollars)
North Carolina	Per Capita Income	Estimate	28,123
		Margin of Error +/-	130
Robeson County	Per Capita Income	Estimate	17,161
		Margin of Error +/-	621
Census Tract 9608.01	Per Capita Income	Estimate	7,756
		Margin of Error +/-	977
Census Tract 9608.02	Per Capita Income	Estimate	17,366
		Margin of Error +/-	5,923
Census Tract 9610	Per Capita Income	Estimate	20,267
		Margin of Error +/-	4188
Census Tract 9611	Per Capita Income	Estimate	11,566
		Margin of Error +/-	1,344
Census Tract 9616.01	Per Capita Income	Estimate	14,687
		Margin of Error +/-	1743
Two Miles	Per Capita Income	Estimate	12,856
		Margin of Error +/-	-
Source: US Census, 2013-2017 ACS 5-Year Estimates			

5   Limited English Proficiency (LEP)

Per the Safe Harbor Guidelines, should an LEP Group be identified during the permit application process, written translations of vital documents for each eligible LEP language group that constitutes five percent or includes 1,000 members (whichever is less) of the population of persons eligible to be served or likely to be affected or encountered. If there are fewer than 50 persons in a language group that reaches the five percent trigger, then DEQ will not translate vital written materials, but instead will provide written notice in the primary language of the LEP language group of the right to receive competent oral interpretation of those written materials, free of cost. The safe harbor provisions apply to the translation of written documents only. Safe harbor guidelines are per the EPA guidance for LEP persons, and implemented by DEQ when deemed appropriate. Seven potential LEP language groups were identified during this initial screening of demographic data. However, none of the language groups identified reached the 5% threshold. If larger LEP groups are identified during the site visit or specific translation requests are received, then DEQ will revisit the Safe Harbor Guidelines.

Table 8. Limited English Proficiency

LANGUAGE SPOKEN AT HOME	Robeson County		Census Tract 9608.01		Census Tract 9608.02		Census Tract 9610		Census Tract 9611		Census Tract 9616.01	
	Estimate	Margin of Error	Estimate	Margin of Error	Estimate	Margin of Error	Estimate	Margin of Error	Estimate	Margin of Error	Estimate	Margin of Error
Total:	125,012	*****	4,032	+/-382	1,783	+/-232	1,972	+/-223	1,865	+/-204	3,428	+/-338
Speak only English	114,895	+/-414	3,896	+/-354	1,747	+/-232	1,756	+/-218	1,663	+/-184	3,237	+/-349
Spanish or Spanish Creole:	8,558	+/-348	132	+/-65	36	+/-46	109	+/-69	183	+/-98	108	+/-84
Speak English "very well"	3,960	+/-392	50	+/-40	26	+/-38	44	+/-31	93	+/-58	35	+/-42
Speak English less than "very well"	4,598	+/-364	82	+/-43	10	+/-11	65	+/-53	90	+/-73	73	+/-75
French (incl. Patois, Cajun):	175	+/-151	0	+/-12	0	+/-12	14	+/-19	9	+/-12	0	+/-12
Speak English "very well"	100	+/-83	0	+/-12	0	+/-12	0	+/-12	0	+/-12	0	+/-12
Speak English less than "very well"	75	+/-71	0	+/-12	0	+/-12	14	+/-19	9	+/-12	0	+/-1
Hindi:	28	+/-20	0	+/-12	0	+/-12	12	+/-16	0	+/-12	0	+/-12
Speak English "very well"	16	+/-12	0	+/-12	0	+/-12	0	+/-12	0	+/-12	0	+/-12
Speak English less than "very well"	12	+/-16	0	+/-12	0	+/-12	12	+/-16	0	+/-12	0	+/-12
Vietnamese:	121	+/-68	0	+/-12	0	+/-12	0	+/-12	0	+/-12	61	+/-53
Speak English "very well"	37	+/-26	0	+/-12	0	+/-12	0	+/-12	0	+/-12	18	+/-26
Speak English less than "very well"	84	+/-61	0	+/-12	0	+/-12	0	+/-12	0	+/-12	43	+/-37
Other Asian languages:	46	+/-45	0	+/-12	0	+/-12	0	+/-12	10	+/-16	0	+/-12
Speak English "very well"	6	+/-8	0	+/-12	0	+/-12	0	+/-12	0	+/-12	0	+/-12
Speak English less than "very well"	40	+/-44	0	+/-12	0	+/-12	0	+/-12	10	+/-16	0	+/-12
Other Pacific Island languages:	37	+/-48	0	+/-12	0	+/-12	33	+/-48	0	+/-12	0	+/-12
Speak English "very well"	18	+/-26	0	+/-12	0	+/-12	18	+/-26	0	+/-12	0	+/-12
Speak English less than "very well"	19	+/-23	0	+/-12	0	+/-12	15	+/-21	0	+/-12	0	+/-12
Arabic:	226	+/-137	0	+/-12	0	+/-12	24	+/-24	0	+/-12	0	+/-12
Speak English "very well"	146	+/-89	0	+/-12	0	+/-12	16	+/-17	0	+/-12	0	+/-12
Speak English less than "very well"	80	+/-61	0	+/-12	0	+/-12	8	+/-9	0	+/-12	0	+/-12
Source: US Census, ACS 5-year estimates 2011-2015												

6. County Health

The University of Wisconsin Population Health Institute, in collaboration with the Robert Wood Johnson Foundation, calculated a County Health Rankings system for all the States in the United States (www.countyhealthrankings.org).This ranking is based on health outcomes (such as lifespan and self-reported health status) and health factors (such as environmental, social and economic conditions). According to this 2019 report, out of all 100 counties in North Carolina (with 1 indicating the healthiest), Robeson County ranks 100th in health factors and 100th in health outcomes (Figure 3).
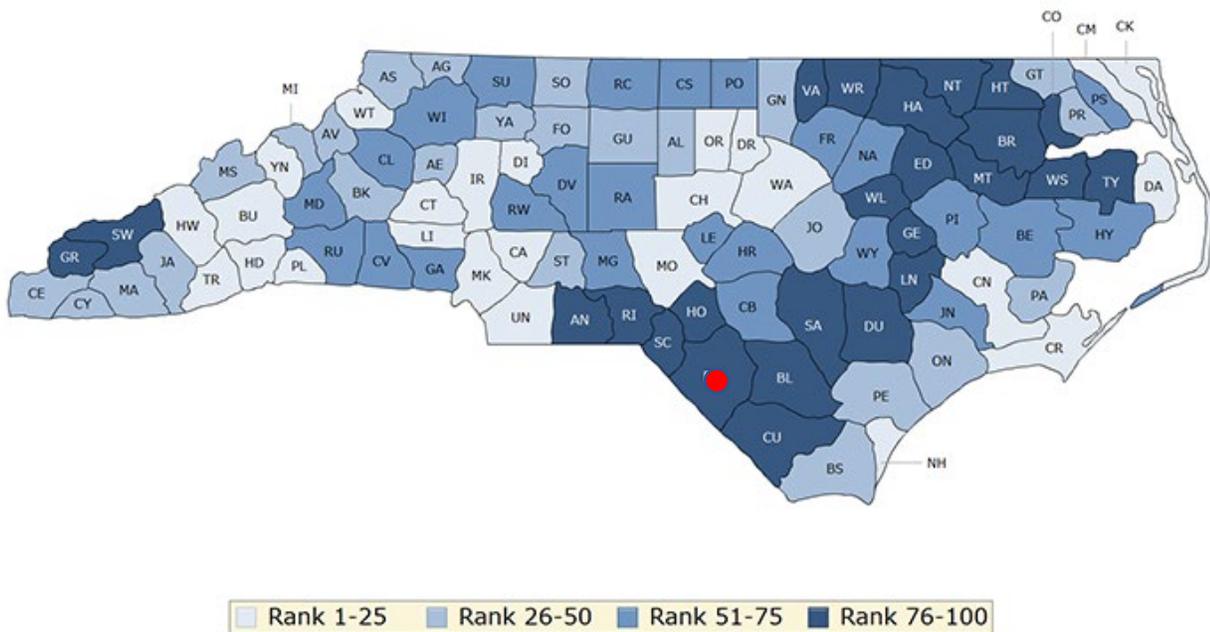
Figure 3. County Health Rankings for Health Factors in North Carolina provided by University of Wisconsin Public Health Institute.

7 Local Sensitive Receptors

The Environmental Protection Agency suggests that sensitive receptors include, but are not limited to, hospitals, schools, daycare facilities, elderly housing and convalescent facilities. These are areas where the occupants are more susceptible to the adverse effects of exposure to toxic chemicals, pesticides, and other pollutants. Extra care must be taken when dealing with contaminants and pollutants in close proximity to areas recognized as sensitive receptors. For instance, children and the elderly may have a higher risk of developing asthma from elevated levels of certain air pollutants than a healthy individual aged between 18 and 64.

Within the two-mile project radius, the following potential sensitive receptors were identified through EJSCREEN and Google Maps (Figure 4):

- WH Knuckles Elementary School
- Janie C Hargrove Elementary School
- Sandy Grove Baptist Church
- Mc Cormick Chapel AME
- Housing Authority of the City of Lumberton (multiple Public Housing complexes)
- Sandhill Church
- Sandhill Baptist Church
- Thompson Chapel Baptist Church
- Christian Faith Center- Lumberton
- Faith Community Christian Center
- Cromartie Temple of Praise
- First Baptist Homes
- Lumberton Junior High School
- Parkview Terrace Apartments
- Holly Ridge Apartments
- Lumber River Baptist Association
- Islamic Center of Lumberton
- Robeson County Public Library
- First Pentecostal Church
- Kingdom Place
- Fountain of Deliverance
- Vertical Church Lumberton
- East Lumberton Baptist Church
- East Lumberton Church of God
- Church of God Parsonage
- Tabernacle Baptist Church
- Ashbury United Methodist Church
- New Light Apostolic Church
- New Point Baptist Church

Additional sensitive receptors may be identified during the permit application process, such as during the field reconnaissance visit or through public comment.
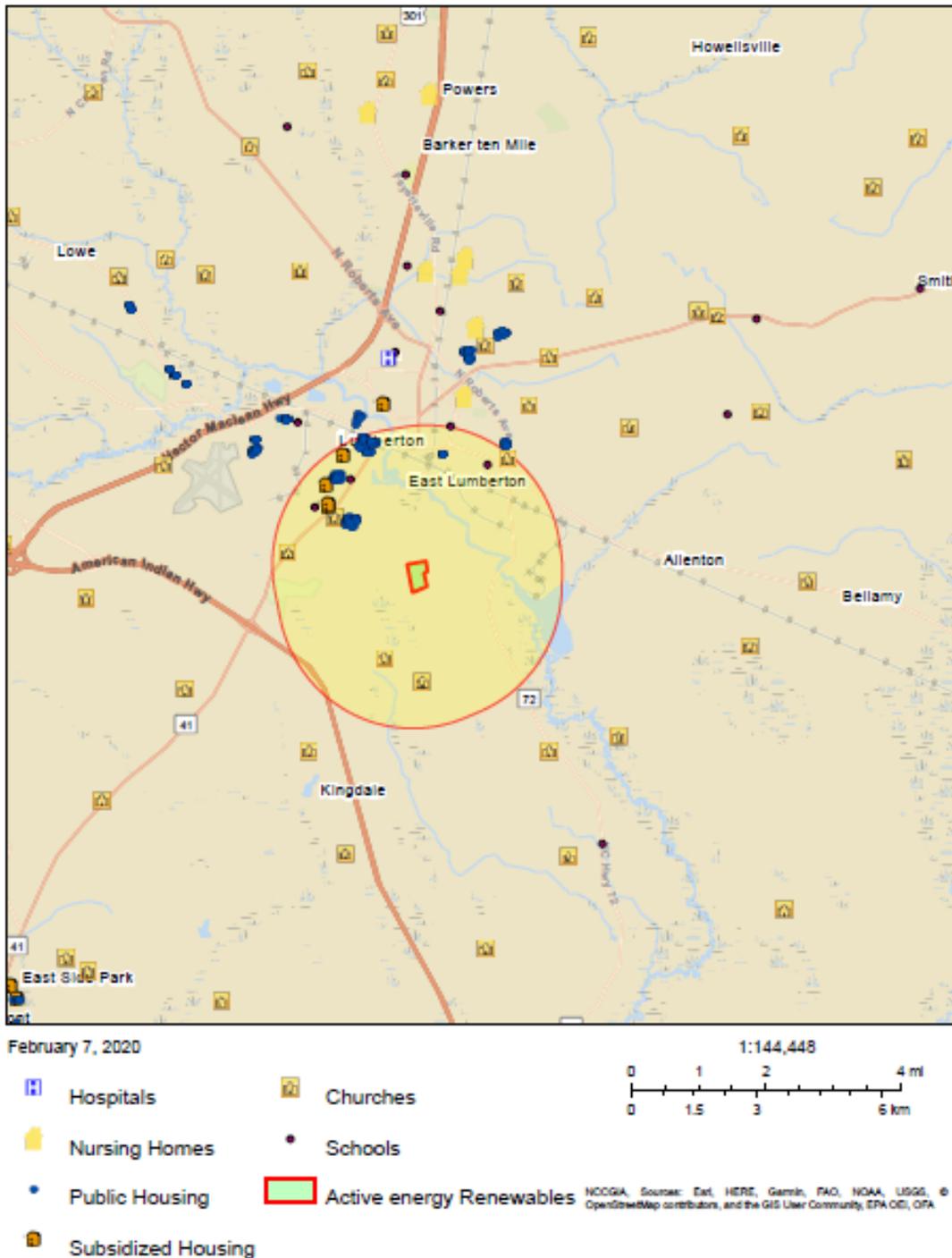

Figure 4. Sensitive receptors surrounding Active Energy facility.

8. Local Industrial Sites

Within the 2-mile radius, there are 133 facility permits or incident reports (as of February 12, 2019). The 133 facility permits and incident reports include:

- 33 NPDES stormwater permits
- 6 NPDES wastewater treatment facility permits
- 2 coal ash structural fills
- 2 permitted solid waste landfills
- 5 inactive hazardous sites
- 1 pre-regulatory landfill site
- 2 brownfield program sites
- 2 hazardous waste sites
- 42 underground storage tank incidents
- 9 aboveground storage tank incidents
- 20 underground storage tank active facilities
- 9 land use restrictions or notices

It is important to note that there may be multiple permits associated with one facility and incidents vary in size, significance, and timeframe.
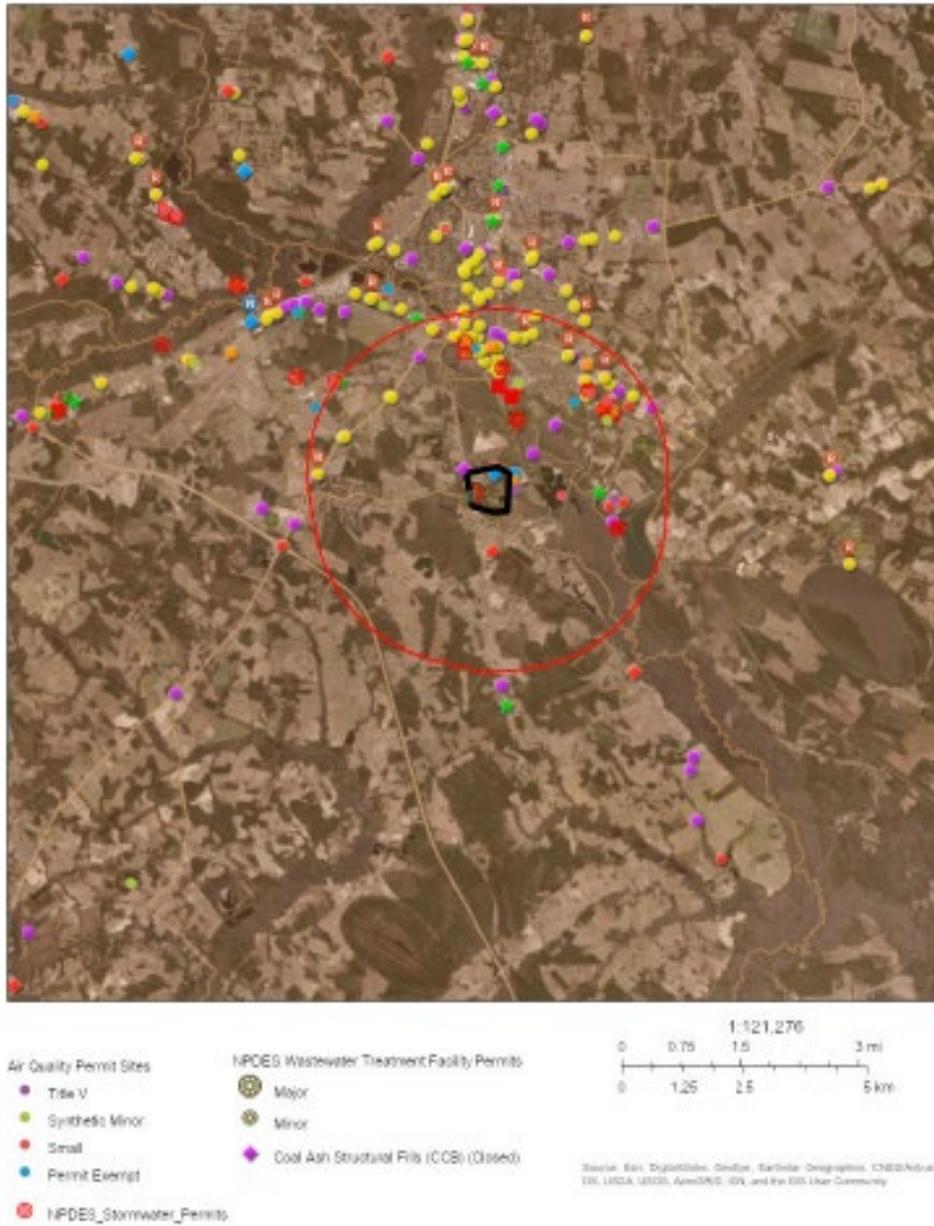
Figure 5. Permitted facilities and incidents with the 2-mile radius surrounding the Active Energy Renewable Power facility

9. Conclusion

The EJ Snapshot is an initial evaluation of the demographics and socioeconomics of the community area surrounding a proposed facility or permit modification. This includes information within a determined radius by the Department (2 miles for this project) on race and ethnicity (decennial census year), poverty, per capita income, and ability to speak English (most current ACS census range), current NC Commerce county tier, and presence or absence of American Indian Tribal areas. The EJ Snapshot does not include a reconnaissance of the community. The proposed Active Energy Renewable Power facility is in an area designated with low health factors and outcomes in comparison to other areas of the State, ranking last place in both. It is also within state designated tribal statistical areas for the Lumbee tribe (Section 6).

The study area displays higher percentages of racial minority groups compared to both the county and the state, especially Black or African American, and American Indian or Alaska Native. The study area also has generally higher poverty levels than both the county and the state. Seven potential LEP language groups were identified during this initial screening, however, none of the language groups identified reached the 5% threshold for Safe Harbor Guidelines.

Additional outreach will be conducted with the Lumbee tribe to keep them informed throughout the permitting process. Extra attention will also be given to ensure language data is accurate and that translation or interpretation will be considered if more LEP populations are identified at any point throughout the process. Finally, the list of sensitive receptors will be consulted while considering additional outreach options that may best fit this community's needs.