



MEMORANDUM Environmental Division

To: Jay Leipzig, AICP, Director,
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From: Darren Coffey, AICP, Director of Strategic Partnerships/Owner
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Date: February 22, 2022

Subject: Comparable Solar Projects

As requested, Staff researched solar projects similar in size to those anticipated in Johnson County, located within an urbanizing county similar to Johnson County.

First, Staff identified counties with populations similar to Johnson County. Johnson County's 2020 estimated population is 607,220. The following 48 counties are similarly sized, ranging in population between approximately 500,000 and 700,000.

State	County	Census 2020 Estimated Population
Massachusetts	Norfolk County	709,409
Missouri	Jackson County	705,925
Tennessee	Davidson County	694,176
Illinois	Lake County	693,593
Illinois	Will County	688,726
New Mexico	Bernalillo County	681,666
New Jersey	Hudson County	671,666
Michigan	Kent County	658,708
Oklahoma	Tulsa County	657,589
Colorado	Arapahoe County	657,452
Alabama	Jefferson County	655,342
Utah	Utah County	651,059
Rhode Island	Providence County	636,547
Pennsylvania	Bucks County	627,987
Texas	Montgomery County	626,351
Vermont	Vermont	623,347

New Jersey	Monmouth County	618,381
Texas	Williamson County	617,855
New Jersey	Ocean County	614,237
Florida	Brevard County	608,459
Kansas	Johnson County	607,220
Oregon	Washington County	603,514
Maryland	Baltimore City	586,131
Colorado	Jefferson County	583,283
Maryland	Anne Arundel County	582,777
Wyoming	Wyoming	582,328
Nebraska	Douglas County	574,332
Florida	Pasco County	570,412
Massachusetts	Bristol County	566,765
Pennsylvania	Delaware County	566,753
Delaware	New Castle County	561,531
Florida	Volusia County	561,497
New Jersey	Union County	555,394
Wisconsin	Dane County	552,536
California	Stanislaus County	550,081
Minnesota	Ramsey County	547,903
Pennsylvania	Lancaster County	546,192
North Carolina	Guilford County	540,521
Ohio	Summit County	538,866
South Carolina	Greenville County	532,486
Ohio	Montgomery County	531,610
Illinois	Kane County	531,010
Washington	Spokane County	528,225
Pennsylvania	Chester County	526,759
Massachusetts	Plymouth County	523,738
Kansas	Sedgwick County	519,907
Colorado	Adams County	519,883
New Jersey	Camden County	506,809
New Jersey	Passaic County	500,382

With regard to comparable projects, the potential NextEra Energy project (West Gardner Solar Project) could have a project area totaling 3,000 acres (in both Johnson and Douglas counties). Additionally, the County has been considering a maximum project area limit of either 2,000 or 1,000 acres. Therefore, Staff worked to identify similarly sized projects on sites with areas between approximately 1,000 acres and 2,000 acres. Additionally, Staff worked to identify

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projects in counties with comparable populations, noting projects in Ocean County, New Jersey, Brevard County, Florida, and Volusia County, Florida.

Facility Name	Project Area (approx..)	Location	County Populations	County Area
Garland Solar Facility	2,000 acres	Kern County, CA	901,362	8,163 sq. miles
GA Solar 4 Project	2,000 acres	Twiggs County, CA	8,103	363 sq. miles
Moapa Southern Paiute	2,000 acres	Clark County, NV	2,315,963	8,061 sq. miles
California Valley Solar Ranch	1,966 acres	San Luis Obispo County, CA	282,249	3,299 sq. miles
Tranquility Solar Project	1,900 acres	Fresno County, CA	1,000,918	6,011 sq. miles
Lund Hill Solar	1,800 acres	Klickitat County, WA	22,697	1,904 sq. miles
Stateline Solar	1,685 acres	San Bernardino County, CA	2,189,183	20,105 sq. miles
Great Valley Solar	1,600 acres	Fresno County, CA	1,000,918	6,011 sq. miles
Springbok Solar Farm	1,400 acres	Kern County, CA	901,362	8,163 sq. miles
Madison Fields Solar Project	1,000 acres	Madison County, OH	44,559	467 sq. miles
TBD - Hypothetical	1,000 acres	Johnson County, KS	607,220	480 sq. miles
Pflugerville/East Blackland Solar Project	932 acres	Travis County, TX	1,300,503	1,023 sq. miles
Toms River Merchant Solar	800 acres	Ocean County, NJ	614,237	915 sq. miles
Palm Bay Solar Energy Center	485 acres	Brevard County, FL	608,459	1,557 sq. miles
DeBary Solar Power Plant	445 acres	Volusia County, FL	561,497	1,432 sq. miles

Upon further review of projects and locations, the significant variation in both populations and county area became apparent. Given this, and taking population density into account, perhaps the best and only comparable above would be the Pflugerville/East Blackland Solar Project in Travis County, Texas. Certainly, there are examples of projects greater than 1,000 acres, but these are almost exclusively located in counties with significantly less persons per square mile than Johnson County. Staff concludes that the 1,000-acre maximum project area is suitable given the density of Johnson County and potential for additional growth.