RESOLUTION NO. 2023-51

RESOLUTION OF THE SUPERVISORS OF THE COUNTY OF SOLANO AMENDING THE SOLANO COUNTY GENERAL PLAN TO UPDATE THE COUNTY'S LAND USE AND DEVELOPMENT POLICIES FOR COMMERCIAL WIND ENERGY DEVELOPMENT (G-23-01)

WHEREAS, on April 6, 2021, the Board of Supervisors enacted Ordinance No. 2021-1819U, which placed a moratorium on new commercial wind energy development within the unincorporated territory of Solano County based, in part, on the following findings:

- The Solano County Airport Land Use Commission's 2015 Travis Air Force Base Land Use Compatibility Plan recommend that new wind turbines should not be located within the line-of-sight or the Travis AFB Digital Airport Surveillance Radar (DASR).

- The 2018 Travis Air Force Base Sustainability Study noted that existing wind turbines south of Travis AFB impact radar field of view and it identified new windfarm development as a compatibility issue due to potential radar interference and height concerns.

- The potential for development of new commercial wind turbine generators and wind farms within the Travis AFB radar field of view without adequate land use policies and standards in place to prevent increased interference with Travis AFB radar presents a current and immediate threat to the public's safety and welfare, and the approval of additional use permits, building permits, or other applicable entitlements for such uses would result in that threat to public safety and welfare.

- While the moratorium was in effect, the County would study and consider land use development policies and standards related to radar interference that should be added to its General Plan and zoning regulations.

WHEREAS, in accordance with the findings and purpose of the moratorium, the County's Planning Division has prepared a set of proposed amendments to the Solano County General Plan, designated as General Plan Amendment G-23-01, to update the County's land use and development policies for commercial wind energy development; and

WHEREAS, because all commercial wind energy projects subject to the County's land use authority require approval of a use permit, and because approval of a new or amended use permit must be consistent with the County's General Plan, the Planning Division has not proposed any amendments to the County's zoning regulations for such projects at this time; and

WHEREAS, on March 2, 2023, the Solano County Planning Commission, after proper notice, conducted a public hearing and recommended to the Board of Supervisors that General Plan Amendment G-23-01 be adopted; and

WHEREAS, on March 9, 2023, the Solano County Airport Land Use Commission reviewed General Plan Amendment G-23-01 and determined the amendments were consistent with adopted airport land use compatibility plans; and

WHEREAS, the Board of Supervisors has considered the recommendation of the Planning Commission, the determination of the Solano County Airport Land Use Commission, the staff report, and all letters, comments, and testimony submitted to the Board in public hearing; and

WHEREAS, the General Plan Amendment is exempt from the California Environmental Quality Act common sense exemption and Class 8 categorical exemptions described in sections 15061(b)(3) and 15308, respectively, of the CEQA Guidelines; and

WHEREAS, the Board of Supervisors, after public notice and public hearing, has determined that the Solano County General Plan should be amended as described in Exhibit A, attached hereto.

RESOLVED, the Solano County Board of Supervisors does hereby amend the Solano County General Plan as described in Exhibit A, attached hereto.

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Passed and adopted by the Solano County Board of Supervisors at its regular meeting on March 28, 2023 by the following vote:

AYES: Supervisors Brown, Williams, Mashburn, and Chair Vasquez

NOES: Supervisors None

EXCUSED: Supervisors Hannigan

JOHN M. VASQUEZ, Chair
Solano County Board of Supervisors

ATTEST:
BILL EMLEN, Clerk
Board of Supervisors

By: _____
Alicia Draves, Chief Deputy Clerk

Exhibit A

General Plan Amendments to address new Wind Turbines

Chapter 2

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Travis Air Force Base

Travis AFB occupies approximately 7,100 acres of land, with two 11,000-foot runways oriented along the northeast-southwest diagonal away from existing housing developments. Travis AFB is home to the world's largest military airlift unit, the 60th Air Mobility Wing, and the wing's reserve counterpart, the 349th Air Mobility Wing. In 1995, the function of the base was expanded by the addition of air refueling assets from March AFB. In 2013, function of the base was further expanded by the construction of an Assault Landing Zone, a short runway used to train military pilots in low altitude tactical approaches, landings, and departures. The U.S. Department of Defense has been using the site for military operations since the early 1940s.

The public is interested in protecting the viability of Travis AFB, and as a part of that effort, in preventing the introduction of incompatible land uses in the vicinity. This change has arisen largely from two factors. One is a heightened awareness of the economic importance of Travis AFB. Secondly, the large number of military base closures in California in recent years, together with the ongoing program of the federal government to eliminate unneeded military bases throughout the country, has raised community concerns about the future of Travis AFB. In light of these factors, the need to ensure long-term land use compatibility between the base and its environs has become a high community priority.

In ~~June 2002~~October 2015, the Solano County ALUC adopted an updated ALUCP~~, now called the~~ for Travis AFB ~~Land Use Compatibility Plan (Travis LUCP)~~. The Travis ALUCP addresses

restrictions on residential development using compatibility zones. Nonresidential development is also addressed by the Travis ALUCP according to the number of people per acre, ~~and established~~ the noise sensitivity of different land uses and activities, and the potential for development to create safety hazards to airport operations. In December 2013, the Solano County ALUC amended the Travis ALUCP to include an Assault Landing Zone Training Area Overlay, where structures greater than 200 feet in height would be incompatible with operation of the Assault Landing Zone. Figure LU-6 indicates the area in which new development must be compatible with the Travis ALUCP. ~~Please see the Travis LUCP for additional information governing actions in the compatibility zones.~~ Various policies of the General Plan relating to new development have been updated to ensure that the General Plan remains consistent with the recommendations made in the Travis ALUCP.

The Travis Air Force Base Sustainability Study Report (Travis SSR), released in April 2018, was a collaborative planning effort by Solano County and the cities of Fairfield, Suisun City, Vacaville, and Vallejo relating to land use regulation, conservation, and natural resource management issues affecting Travis AFB and local communities. Compatibility factors addressed in the Travis SSR include the growing population and pressure to develop land, the potential increase of alternative energy development in the vicinity, and the natural and biological resources that surround Travis AFB. Development policies in the General Plan also reflect recommendations made in the Travis SSR.

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Goal and Policies

The following goal and policies were developed based on community input and along with the land use diagram will be used to review ~~and update~~proposals for new development in the Collinsville-Montezuma Hills Area ~~Plan~~.

Goal

SS.G-3: Protect and maintain the historic communities of Birds Landing and Collinsville while continuing to provide opportunities for industrial development that are compatible with the Collinsville area.

Policies

SS.P-19: Support the continued commercial use of existing commercial parcels in Birds Landing.

SS.P-20: Explore historic preservation for historic buildings located within the study area.

SS.P-21: Preserve the residential character of the Collinsville town site; ensure that any future nonresidential uses are compatible with the residential character and that an adequate buffer is established between residential and nonresidential uses.

SS.P-22: Preserve and enhance residential and commercial uses in Birds Landing.

SS.P-23: Focus on renewable energy, other than wind energy, in the development of Water Dependent Industrial uses.

SS.P-24: Provide adequate circulation for new industrial development in the Water Dependent Industrial land use designation, and protect circulation for adjacent, nonindustrial land uses, including agricultural and other local traffic.

SS.P-25: Support the development of Commercial Recreation uses in designated portions of the Collinsville town site.

SS.P-26: Maintain and support the expansion of neighborhood commercial uses appropriate for the traditional community in Birds Landing.

SS.P-27: Protect existing historic communities from floodwaters by supporting the ongoing maintenance of levees and other flood control mechanisms.

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~~Regulations~~

~~SS.1-7 Review and update the Collinsville-Montezuma Hills Area Plan and Program consistent with the Collinsville special study area land uses, policies and~~

~~programs. The Area Plan policies and programs that apply to the secondary management area of the Suisun Marsh shall be reviewed and updated consistent with the Suisun Marsh Protection Plan.~~

~~Related Policies: SS.P-19, SS.P-20, SS.P-21, SS.P-22, SS.P-23, SS.P-24, SS.P-25, SS.P-26, SS.P-27~~

~~Agency/Department: Department of Resource Management~~

~~Funding Source: General Fund, Project Applicants~~

~~Time Frame: 2011~~

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SS.I-13: ~~Continue to promote~~Promote the development of ~~renewable~~ commercial grid-level solar energy production and battery storage in the Collinsville area. Renewable energy should be considered in the development of the Water Dependent Industrial area. Maintain an agricultural or marsh buffer between homes in Collinsville and any future industrial uses to mitigate visual impacts, glare, noise, and particulates.

Related Policy: SS.P-23

Agency/Department: Department of Resource Management

Funding Source: General Fund

Time Frame: Ongoing

Chapter 4

Page RS-4

Relationship to Other General Plan Chapters

State planning law requires general plans to be internally consistent, meaning that statements in one section are in agreement with all other portions of the plan. The Resources chapter contains goals, policies, and programs closely related to those contained in the Land Use, Agriculture, and Public Health and Safety chapters. However, this chapter differs by being almost exclusively oriented toward natural resources.

The Land Use chapter defines a planned land use pattern, identifying natural resource, agricultural, residential, commercial, industrial, and public use designations. Public and private lands intended for conservation, open space, and recreational purposes are identified on the Land Use diagram using the Water Bodies and Courses, Park and Recreation, Marsh, Watershed, Agriculture, and Public/Quasi-Public land use designations. The Land Use chapter and diagram also present ~~four~~ five special purpose ~~designations~~ land use overlays intended to further preservation of one or more resources, including a Vacaville-Fairfield-Solano Greenbelt Overlay to provide a permanent separation between the Vacaville and Fairfield urban areas, a Resource Conservation Overlay to conserve biological resources, an Agricultural Reserve Overlay to promote consolidation of agricultural conservation easements and mitigation lands, a Tri-City and County Cooperative Planning area to promote conservation of open space resources, and a ~~Wind Energy Resources Overlay to identify desired locations for wind energy facilities~~Travis Reserve Area Overlay to maintain existing agricultural uses on lands that may be needed for the expansion of Travis Air Force Base or development of a civilian or joint-use airport.

The Agriculture chapter provides goals and policies to protect the County's farmland resources. Many similarities exist between the policies in the Resources chapter and the Agriculture chapter, including policies regarding urban-agricultural buffers created to reduce conflict

between adjacent land uses and community separators used to reinforce individual identity and physical separation of communities.

The Public Facilities and Services chapter addresses supply and use of resources and essential services, whereas the Resources chapter addresses their preservation and conservation. Water facilities and service and water resources and quality are closely linked. Policies in this chapter protect the water resources that are the foundation of a public water system. Energy resources and utilities are also closely related. The Resources chapter discusses energy resources within the county and various means of energy generation and conservation, whereas energy infrastructure and supply are discussed in the Public Facilities and Services chapter.

Pages RS-52 & 53

Wind energy converts the movement of wind to electricity through mechanical wind turbines. Wind electricity can be generated both on a small scale in agricultural and residential land and on a large scale through wind farms. Climatic conditions have blessed Solano County with excellent wind energy resources, and the county is one of five major utility-scale producers of wind energy in California.

While the county has extensive wind energy resources, numerous environmental concerns remain related to wind turbines. The biggest of these issues ~~is~~ are the potential for wind turbines to interfere with the air traffic navigation radar used by Travis Air Force Base and the potential for bats and birds to be caught in the turbines and killed. A number of design improvements which have become standard practice have reduced ~~these~~ the potential effects on bat and bird populations but the potential effects on air traffic navigation radar remain unresolved. In addition, newer turbine designs are much taller than older ones and these taller turbines can interfere with flight paths used by Travis Air Force Base even when the turbine structure does not intrude into navigable airspace.

~~The County has identified the Collinsville-Montezuma Hills south of Highway 12 as the primary wind resource area in the county.~~ Noncommercial accessory wind turbine installations less than 100 feet in height and with a total rated power output of 100 kilowatts or less do not have a potential to cause significant environmental impacts or interfere with Travis Air Force Base, and are allowed with a building permit in any agricultural or natural resource zoning district. ~~These types of installations are defined as less than 100 feet in height, with a total rated power output of 100 kilowatts or less. The guidelines and standards found within the General Plan implementation programs are directed at commercial, non-accessory wind turbine installations. Agricultural lands within the county are particularly appropriate for wind harvesting as turbines generally do not interfere with daily agricultural operations and can provide additional revenue on these properties.~~

~~Wind~~ Commercial wind energy development ~~is~~ and noncommercial wind turbine generators more than 100 feet in height are inappropriate in ~~certain~~ most areas of the county, in order to protect public health and safety and natural resources. These areas are urban areas, the agricultural areas north of Highway 12, the Suisun Marsh Primary and Secondary Management ~~Area~~Areas, the Stebbins Cold Canyon Natural Area, San Pablo Bay National Wildlife Refuge, and the Jepson Prairie preserve owned by the Solano Land Trust. In addition, commercial wind energy development is inappropriate in areas where such development could materially interfere with the operation of air traffic navigation radar at Travis Air Force Base or the flight paths used by Travis aircraft.

Based on current radar technology and wind turbine materials, the method of siting wind turbines beyond the radar line-of-sight is the most proven and effective method for minimizing wind turbine impacts on a radar's aircraft detection capabilities. Siting wind turbines outside of the radar's line-of-sight is critical to mitigating additional cumulative effects arising from the addition of new turbines to those already existing within the current radar line-of-sight, as every additional turbine within the radar's line-of-sight negatively impacts the radar. However,

radar technology and turbine designs are constantly improving, and better methods are being developed to model how new turbine installations could impact air traffic navigation radar.

~~In other areas of the county~~The County anticipates that the line-of-site method for evaluating potential impacts of wind turbines on radar operation will become outdated during the planning horizon of this General Plan, at which point proposals for commercial wind energy development will be processed under the normal use permit procedure. ~~Additional documentation may be required due to lack of existing data. Wind~~ Under the use permit procedure, commercial wind energy development, depending on size and location of the project, may require ~~both wind resource verification and~~ an environmental impact report to meet CEQA requirements. ~~The County incorporates by reference the most up-to-date mapping of wind resource areas available from the California Energy Commission, or subsequent agency, into the General Plan.~~ Applicants seeking permits for commercial wind turbine installations shall be required to demonstrate that the wind resource in their area is adequate using the mapping, wind studies and technology current to their permit application. Any future development of wind energy must be consistent with Airport Land Use Plans, the purposes for those plans as described in the State Aeronautics Act, and air operations of Travis Air Force Base and the Rio Vista Airport.

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Policies

RS.P-49: Ensure energy conservation and reduced energy demand in the county through required use of energy-efficient technology and practices.

RS.P-50: Provide incentives for city and county residents and businesses to produce and use renewable sources of energy.

RS.P-51: Promote Solano County as a model for energy efficiency and green building.

RS.P-52: Ensure adequate and affordable supplies of energy to meet the energy needs of the county.

RS.P-53: Enable renewable energy sources to be produced from resources available in Solano County, such as solar, water, wind, and biofuels to reduce the reliance on energy resources from outside the county.

RS.P-54: Reduce Solano County's reliance on fossil fuels for transportation and other energy-consuming activities.

RS.P-55: Require responsible extraction, storage, and transportation of natural gas resources that minimize the impact on the natural environment.

RS.P-56: Provide information, marketing, training, and education to support reduced energy consumption, the use of alternative and renewable energy sources, green building practices, recycling, and responsible purchasing.

RS.P-57: Encourage the use of technology or siting to minimize adverse impacts from energy production facilities on the environment, including wildlife and agricultural resources.

RS.P-58: Require the siting of energy facilities in a manner compatible with surrounding land uses, including Travis Air Force Base, and in a manner that will protect scenic resources.

RS.P-58A: New commercial wind energy facilities and noncommercial wind turbines greater than 100 feet in height should not be sited in identified natural resource areas or in areas north of Highway 12.

RS.P-58B: No wind turbine greater than 100 feet in height, measured at the apex of the blade at its highest point, shall be within a line-of-sight of the Travis AFB Digital Airport Surveillance Radar (DASR) Radar Installation. All commercial wind turbine facilities and non-commercial wind turbines greater than 100 feet in height shall provide an individual radar line-of-sight analysis to demonstrate that the placement of the proposed facility or wind turbine is not within a line-of-sight to the Travis DASR Radar Installation.

RS.P-58C: Existing commercial and non-commercial wind turbines may be replaced only if the replacement turbine has dimensions and materials similar to the original. Replacement turbines that are significantly taller than the original, or built with materials that are significantly more reflective than the original, shall be subject to policy RS.P-58B.

RS.P-58D: Policies RS.P-58B and RS.P-58C implement the Airport Land Use Commission's 2015 Airport Land Use Plan for Travis Air Force Base. For that reason, these two policies will remain in effect through December 31, 2028, unless amended prior to then by the Board of Supervisors due to changes in wind turbine designs, radar technology, or radar impact modeling methods. After December 31, 2028, policy RS.P-58E shall become effective.

RS.P-58E: An applicant proposing installation or replacement of a wind turbine generator greater than 100 feet in height shall model anticipated impacts to verify that there will be no net increase in radar interference above baseline to Travis Air Force Base, using a modeling methodology of proven reliability. The applicant must demonstrate that the project will cause no measurable decrease in the ability of the Travis Air Force Base air navigation radar to detect targets. In addition, the applicant must demonstrate that the project will not negatively impact existing or anticipated flight operations of Travis Air Force Base.

RS.P-59: Encourage on-site renewable energy production and use and energy conservation measures.

Implementation Programs

Regulations

RS.I-37: Amend and maintain the zoning ordinance to guide the siting or repowering of commercial~~, non-accessory~~ wind turbine installations and noncommercial wind turbines greater than 100 feet in height, consistent with the limitations described in

policies RS.P-58A through RS.P-58C. Include the following standards into the ordinance:

- Require a minimum setback of 1,000 feet or three times total turbine height, whichever is greater, from a dwelling unit, residential building site, or land zoned for residential uses.
- Require a minimum setback of three times total turbine height from any zoning district (other than residential) which does not allow wind turbines.
- Require a minimum setback of three times total turbine height from any property line, public roadway, transmission facility, or railroad. This minimum setback may be waived in the case of wind farms located on adjacent parcels, provided an agreement has been reached between the neighboring property owners.
- Require a setback of 1/4 mile from the right-of-way of any scenic roadway.
- In the Cordelia Hills, wind energy development shall be set back to those areas which are beyond the sight of existing residential neighborhoods and areas planned for residential development, and set back to areas beyond view from I-80 and I-680. No turbine shall be sited within this zone.
- ~~Define noncommercial wind energy generators as "wind-driven machines" that convert wind energy into production of electrical power for the primary purpose of on-site use and not for resale, that are 100 feet or less in height, and that have a total rated power output of 100 kilowatts or less.~~
- Require that Travis Air Force Base be notified of any permit application for commercial wind energy development or a noncommercial wind turbine more than 100 feet in height.
- Require applicants to demonstrate that the project will not cause material adverse impacts to radar operations at Travis Air Force Base or to flight paths used by Travis Air Force Base.

- Establish a procedure for plan check and testing of wind electric generators prior to use permit or building permit approval. Certification of all detailed plans for electrical systems, electrical substations, support towers, and foundations by California licensed professional engineers shall be required. Performance testing of wind turbine generators shall be required to ensure against catastrophic failure.
- Include commercial wind turbine development as a permitted use in the following zone districts:

  Exclusive Agricultural (A)

  ~~Limited Agricultural (A-L)~~

  Water-Dependent Industrial (I-WD)

  Limited Manufacturing (M-L)

  General Manufacturing (M-G)

  Watershed and Conservation (W)
- Non-commercial wind energy development shall be allowed in districts as currently provided for in the ordinance.

Related Policies: RS.P-22, RS.P-37, RS.P-58 – RS.P-58E

Agency/Department: Department of Resource Management

Funding Source: General Fund

Time Frame: By ~~2011~~2024

Pages RS-61 – 64

RS.I-50: During review of wind turbine generator proposals, consider the following:

- Wind turbine generators shall not be located in areas that conflict with the mission of Travis Air Force Base or other air operation facilities.
- Commercial turbines and non-commercial turbines over 100 feet in height or with a total rated power output of more than 100 kilowatts ~~in designated~~

~~wind resource areas~~ require a public hearing and use permit approval by the Planning Commission.

- Following use permit approval, building permits and grading permits are required. Noncommercial turbines 100 feet or less in height and 100 kilowatts or less in rated power output require only building permits and grading permits.
- Submittal requirements for use permit applications ~~within the wind resource areas~~ include the following:
    - Permit application
    - Project description form (requires information on size and characteristics of project, physical and performance specifications of equipment, transmission system, certification, project schedule and phasing, circulation, and access).
    - Acoustical analysis
    - Archaeological survey
    - Radar Impact analysis, if wind turbine generators greater than 100 feet in height will be within line-of-sight of the air traffic navigation radar at Travis Air Force Base.
    - Geotechnical report (must correlate to standard county requirements for geotechnical analysis)
    - Site plan
    - Elevation package (elevation drawings to scale of proposed turbines and accessory uses).
    - Notification of the Federal Aviation Administration of any application with wind turbines over 200 feet in height ~~within 20,000 feet of a runway of any airport~~.
    - Notification of the utility and the California Public Utilities Commission of application filing.

  - Notification of application filing to microwave communications link owners within 2 miles of the proposed installation.
  - Adjacent property owner's notification package.
  - Current aerial photographs or panoramic photographs of the site.
  - Evidence of liability and workers compensation insurance.
  - Map locating all residences within 2 miles of the proposed project.
  - Certification of detailed plans for electrical systems and transmission lines, substation, support towers, generators, and foundations by California licensed professional engineers (electrical, civil, and structural).
  - Performance test documentation by a licensed engineer for all proposed turbine types.
  - Contribution to escrow account for removal of inoperable or unsafe wind equipment and associated uses, including foundations.
- Following review of the applicant's site plan by county planning staff, a biological assessment would be required if it is determined that sensitive biological resources identified by the Resource Conservation Overlay (Figure RS-2) could be affected by the proposed project. If the proposed wind turbine siting would fall within or near areas of sensitivity, additional biological assessment of the probable impacts of the project would be required as part of the permit application. Findings of the biological assessment would determine need for biological resource monitoring and mitigation for protection of biological resources. For projects proposed in areas of low biological sensitivity, no additional biological information would be required.
- Submittal requirements for building permit and grading permit applications shall be as follows:
  - Completed permit application.

- Detailed plans and specifications for structures, foundations, electrical systems, certified by a California licensed professional engineer. Plans will be checked for compliance with such codes as the Uniform Building Code, the National Electrical Code, and applicable ANSI and IEEE standards.
- Grading and erosion, sediment, and runoff control plans.

- ~~A standard set of minimum conditions would apply to every permit approval. These conditions could be modified or added to at the discretion of Resource Management Department staff, Planning commission, or Board of Supervisors.~~
- ~~Additional environmental information beyond that required for permit processing would not be required for projects proposed within the wind resource areas.~~
- In addition to the required safety setbacks, applicants would be required to demonstrate that the CNEL 50 influence area of proposed wind turbines would not coincide with residential areas or individual dwelling units. No turbines which exhibit high infrasonic noise generation potential would be permitted within one mile of residential uses or land zoned for residential uses.
- The zoning ordinance should require a bond or other guarantee, such as a contribution to an escrow account, for removal of inoperable or unsafe wind equipment and associated uses, including foundations, after use permit approval.

Related Policies: RS.P-22, RS.P-50, RS.P-52, RS.P-53, RS.P-54, RS.P-56,RS.P-57, RS.P-58 – RS.P-58E

Agency/Department: Department Resource Management

Funding Source: General Fund

Time Frame: Ongoing