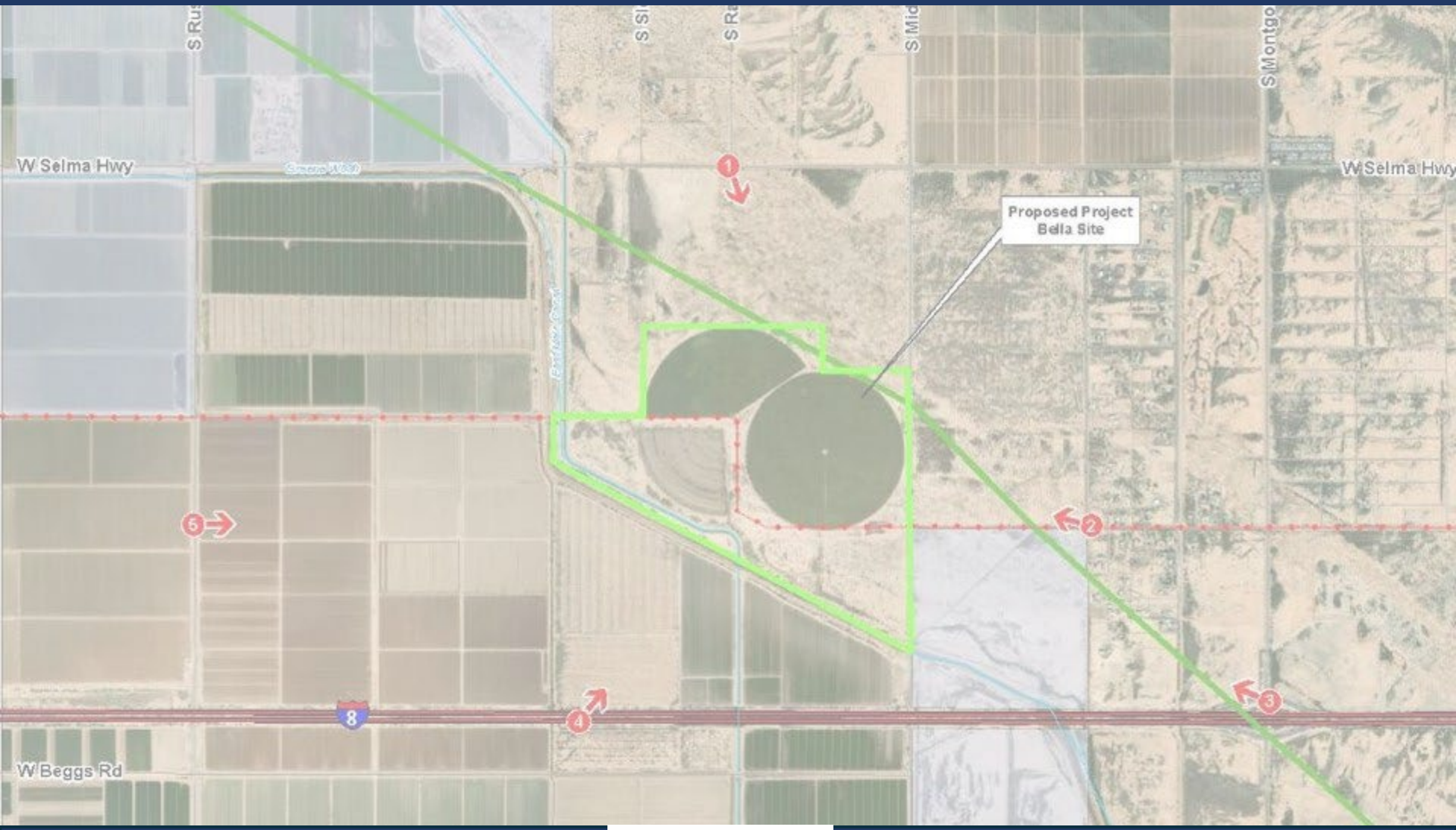
Project Bella

PZ-PA-008-24



Two Projects – One Efficient Solution



Frequency Regulation

Reliability Reserves

Efficient Dispatch Optimization



Natural Gas Thermal Generation

- GE LM6000 natural gas turbines = total capacity of 480 MW.
- Small footprint – 1/10th land of solar
- Reliability Resource “Peaker Plant” – Not a 24/7 operation.
- Quick ramping structure ideal for renewable energy integration and local reliability purposes.
- Projected Commercial Operation Date is Spring 2027 – Spring 2028.

Grid-Charged Battery Energy Storage

- 440 MW of grid-charged BESS with liquid cooled cabinets and self-contained fire suppression systems.
- Quick deployment of charge and discharge to and from the grid
- Provides essential load shifting, renewable integration, frequency regulation and peak energy supply to compliment local reliability.
- Projected Commercial Operation Date is Spring - Fall 2027.

Visual Perspective Rendering



PROJECT BELLA

WEST CORNMAN ROAD & SOUTH MAMMOTH DRIVE - LOOKING NORTHWEST - PROPOSED VIEW

THIS RENDERING IS BASED ON CURRENT INFORMATION AS OF THIS DATE AND IS SUBJECT TO CHANGE.

KOP# 2

Visual Environments

6/6/24

Figure E-3B

Visual Perspective Rendering



PROJECT BELLA

I-8 & SOUTH MONTGOMERY ROAD - LOOKING NORTHWEST - PROPOSED VIEW

THIS RENDERING IS BASED ON CURRENT INFORMATION AS OF THIS DATE AND IS SUBJECT TO CHANGE

KOP# 3

Visual Environments

6/6/24

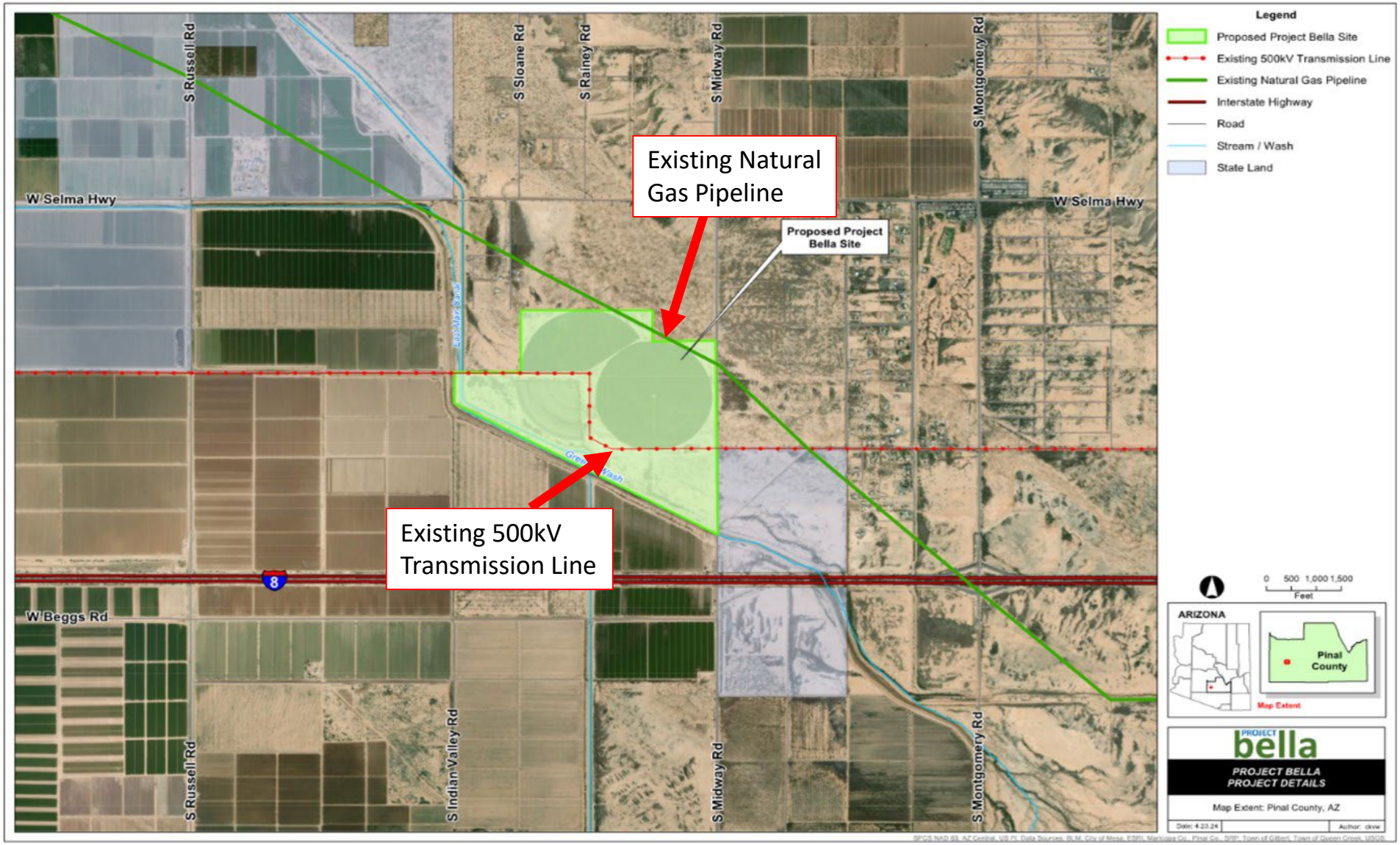
Figure E-4B

Unanimous Recommendation of Approval from ACC Line Siting Committee

- Committee recommended approval of Project Bella by vote of **11-0** after:
  - 4 days of expert testimony
  - 900 pages of detailed filings
  - 2 in-person public comment sessions
  - Site visit by entire Line Siting Committee to see firsthand the site context
- **ACC approved CEC for Project Bella on October 8th**

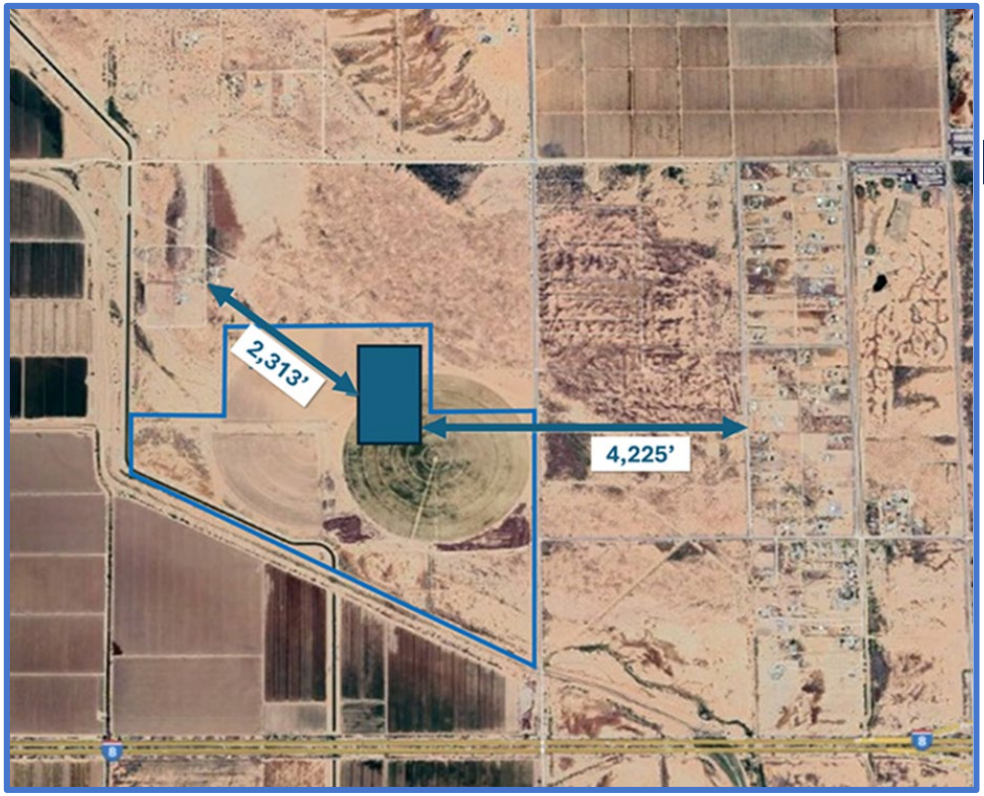
Why this location?

Existing Infrastructure



Land Use Compatibility

Project Bella's Separation from Residential Uses:



Similar Projects:

Generating Station	Single Family Homes within 1000ft	Single Family Homes within 1 Mile
Proposed Project Bella Generators	0	58
Desert Basin Generating Station	0	1183
Sundance Power Plant	1	36
Coolidge Generation Station	15	80
Copper Crossing Solar Ranch	225	479
Kyrene Generating Station	213	6517
Santan Generating Station	405	6357

Land Use Attributes

Will Use Less Water than Property Currently Uses

- Project Bella will utilize **less** water than current agricultural operations
- Groundwater use limited to 420 acre feet per year
- Study verifies **no** impact on existing domestic wells

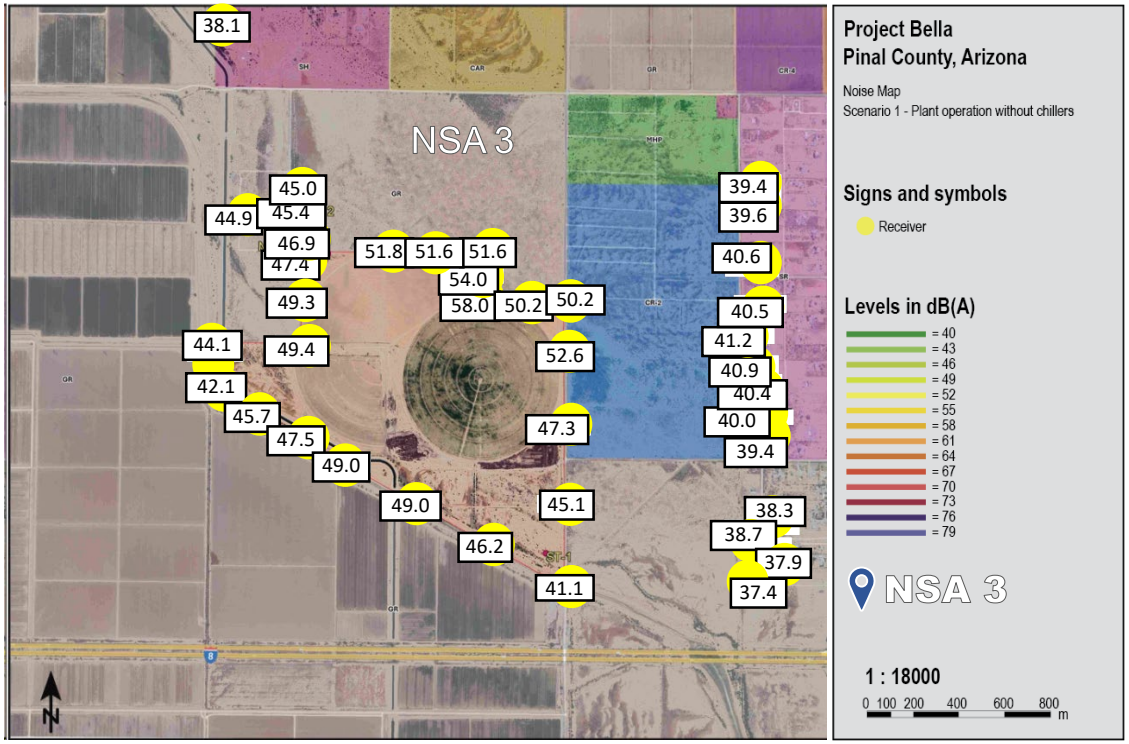
Current Use:	463.57 ac-ft (avg)
Projected Use	395 ac-ft
Max. Modified Use:	420 ac-ft
Decrease:	**43.57 ac-ft**

Air Permit Issued by Pinal County Air Quality Control District

- Permit reviewed by PAQCD and EPA for compliance with NAAQS – standards designed to protect human and health and welfare
- 17 months of review and modeling
- Establishes operational parameters – limits total operation time
- Requires continuous emissions monitoring, monthly reporting, and ongoing compliance verification to ensure emissions performance



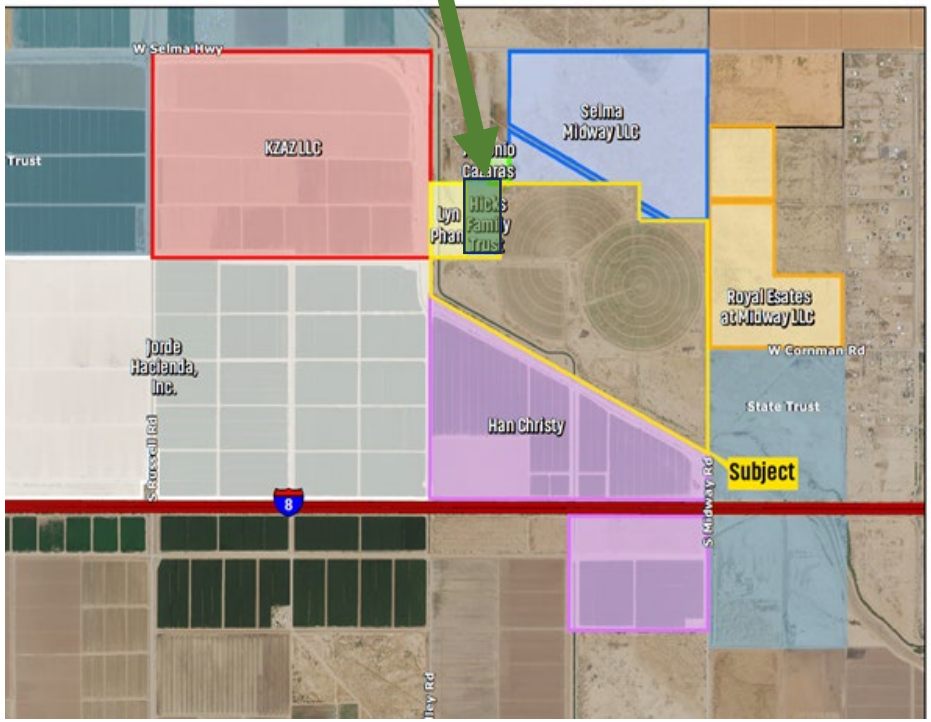
Will Comply with Pinal County Noise Ordinance



- Modeling shows increase of only 2 decibels over existing background noise (barely perceptible)
- Sound study within 120 days of commercial operation to verify modeling
- Must provide additional sound mitigation measures if levels exceed ordinance

Community Fire and EMS Equipment Donation

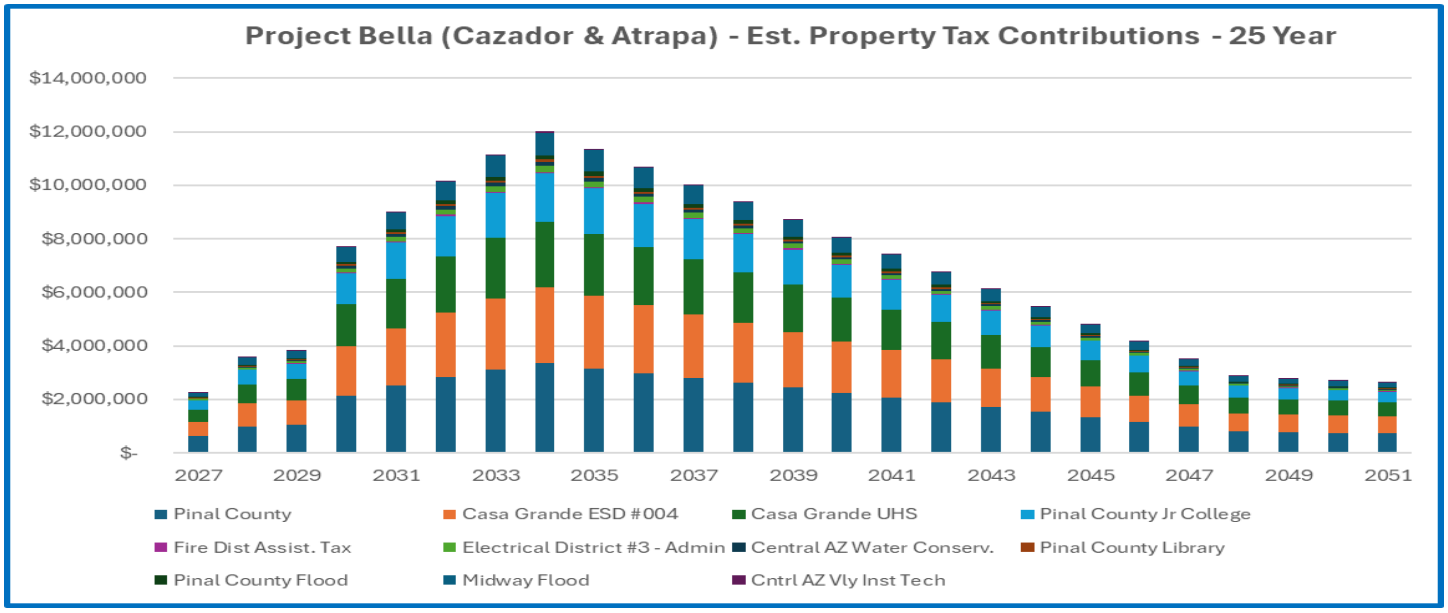
Proposed location for community Fire and Safety Equipment, donated by Project Bella. Procurement cost: $1,350,000, plus land.



- Will provide 20+ acre parcel at no cost to community for location of a local fire and safety response office.
- Will provide fire truck / EMS equipment and construct warehouse / office for the benefit of the community prior to operations.
- **This is in addition to and separate from the self-contained Project-specific fire detection and suppression systems.**

Substantial Fiscal Impact for County

- Estimated **$167,000,000** of new tax revenue
- Average annual tax revenue = **Approx. $6,700,000**
  - Tax revenue currently generated from the site's Ag use = $4,500



Significant Job Creator

- Hundreds of jobs created through construction phase
- ~14 full time employees during operations
- Skilled, high-wage employees

Project Bella Staffing Plan

	Positions	Initial Salary	Total with Loading (w Taxes & Benefits)
Plant Manager	1	$ 175,000.00	$ 250,250.00
Admin Assistant	1	$ 60,000.00	$ 85,800.00
Electrical/Controls Engineer	1	$ 145,000.00	$ 207,350.00
Mechanical Engineer	1	$ 140,000.00	$ 200,200.00
Compliance Engineer	1	$ 130,000.00	$ 185,900.00
O&M Supervisor	1	$ 120,000.00	$ 171,600.00
O&M Tech/operator	6	$ 95,000.00	$ 815,100.00
O&M tech/I&C	2	$ 105,000.00	$ 300,300.00
Total	14		$ 2,216,500.00

Funding for the Community

- Project Bella will establish a Community Working Group ("CWG") to share operational study results and coordinate mitigation strategies where necessary to ensure clear and transparent communication with Community.

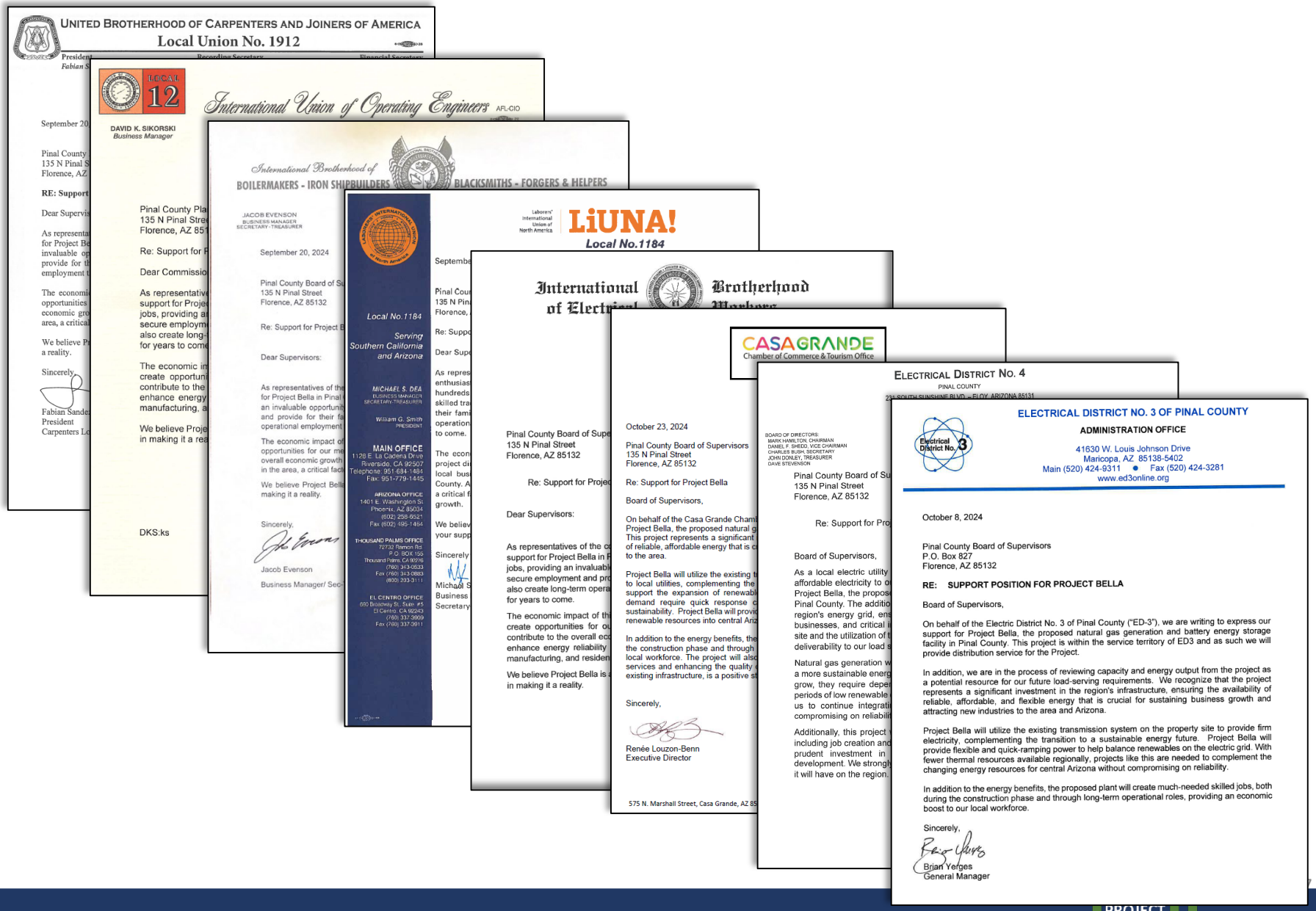
Working Group Composition

- **4 members of the local community – live within 1 mile**
- **2 members representing Project Bella**
- **Up to 2 representatives from Pinal County**

Funding of CWG by Project Bella

- **$4.1 million**
- **Community will direct funding for benefit of the area**

Support for Project Bella



UNITED BROTHERHOOD OF CARPENTERS AND JOINERS OF AMERICA
Local Union No. 1912

LOCAL 12
International Union of Operating Engineers AFL-CIO
DAVID K. SIKORSKI
Business Manager

International Brotherhood of
BOILERMAKERS - IRON SHIPBUILDERS BLACKSMITHS - FORGERS & HELPERS
JACOB EVENSON
BUSINESS MANAGER
SECRETARY-TREASURER
September 20, 2024
Pinal County Board of Supervisors
135 N Pinal Street
Florence, AZ 85132
Re: Support for Project Bella
Dear Supervisors:
Sincerely,
Jacob Evenson
Business Manager/ Secretary-Treasurer
DKS:ks

Local No.1184
Serving Southern California and Arizona
MICHAEL S. DEA
BUSINESS MANAGER
SECRETARY-TREASURER
William G. Smith
PRESIDENT
MAIN OFFICE
1128 E. La Cadena Drive
Riverside, CA 92507
Telephone: 951-684-1484
Fax: 951-779-1445
ARIZONA OFFICE
1401 E. Washington St.
Phoenix, AZ 85034
(602) 258-6521
Fax (602) 495-1464
THOUSAND PALMS OFFICE
72732 Ramon Rd.
P.O. BOX 159
Thousand Palms, CA 92276
(760) 343-0523
Fax (760) 343-0883
(800) 203-3111
EL CENTRO OFFICE
650 Broadway St., Suite #5
El Centro, CA 92243
(760) 337-3909
Fax (760) 337-3911

Laborers' International Union of North America
LiUNA!
Local No.1184

International Brotherhood of Electrical Workers

CASAGRANDE
Chamber of Commerce & Tourism Office
October 23, 2024
Pinal County Board of Supervisors
135 N Pinal Street
Florence, AZ 85132
Re: Support for Project Bella
Board of Supervisors,
Sincerely,
Renée Louzon-Benn
Executive Director
575 N. Marshall Street, Casa Grande, AZ 85

BOARD OF DIRECTORS:
MARK HAMILTON, CHAIRMAN
DANIEL F. SHEDD, VICE CHAIRMAN
CHARLES BUSH, SECRETARY
JOHN DONLEY, TREASURER
DAVE STEVENSON

ELECTRICAL DISTRICT NO. 4
PINAL COUNTY

ELECTRICAL DISTRICT NO. 3 OF PINAL COUNTY
ADMINISTRATION OFFICE
41630 W. Louis Johnson Drive
Maricopa, AZ 85138-5402
Main (520) 424-9311 ● Fax (520) 424-3281
www.ed3online.org
October 8, 2024
Pinal County Board of Supervisors
P.O. Box 827
Florence, AZ 85132
RE: SUPPORT POSITION FOR PROJECT BELLA
Board of Supervisors,
On behalf of the Electric District No. 3 of Pinal County ("ED-3"), we are writing to express our support for Project Bella, the proposed natural gas generation and battery energy storage facility in Pinal County. This project is within the service territory of ED3 and as such we will provide distribution service for the Project.
In addition, we are in the process of reviewing capacity and energy output from the project as a potential resource for our future load-serving requirements. We recognize that the project represents a significant investment in the region's infrastructure, ensuring the availability of reliable, affordable, and flexible energy that is crucial for sustaining business growth and attracting new industries to the area and Arizona.
Project Bella will utilize the existing transmission system on the property site to provide firm electricity, complementing the transition to a sustainable energy future. Project Bella will provide flexible and quick-ramping power to help balance renewables on the electric grid. With fewer thermal resources available regionally, projects like this are needed to complement the changing energy resources for central Arizona without compromising on reliability.
In addition to the energy benefits, the proposed plant will create much-needed skilled jobs, both during the construction phase and through long-term operational roles, providing an economic boost to our local workforce.
Sincerely,
Brian Yerges
General Manager

Community Engagement

Central Arizona College

PINAL ALLIANCE FOR ECONOMIC GROWTH

BOYS & GIRLS CLUBS OF THE SUN CORRIDOR

YES 486 Maintain Our Roads Without Raising Taxes

CASA GRANDE Chamber of Commerce & Tourism Office

PINAL PARTNERSHIP Uniting the Vision for Pinal County

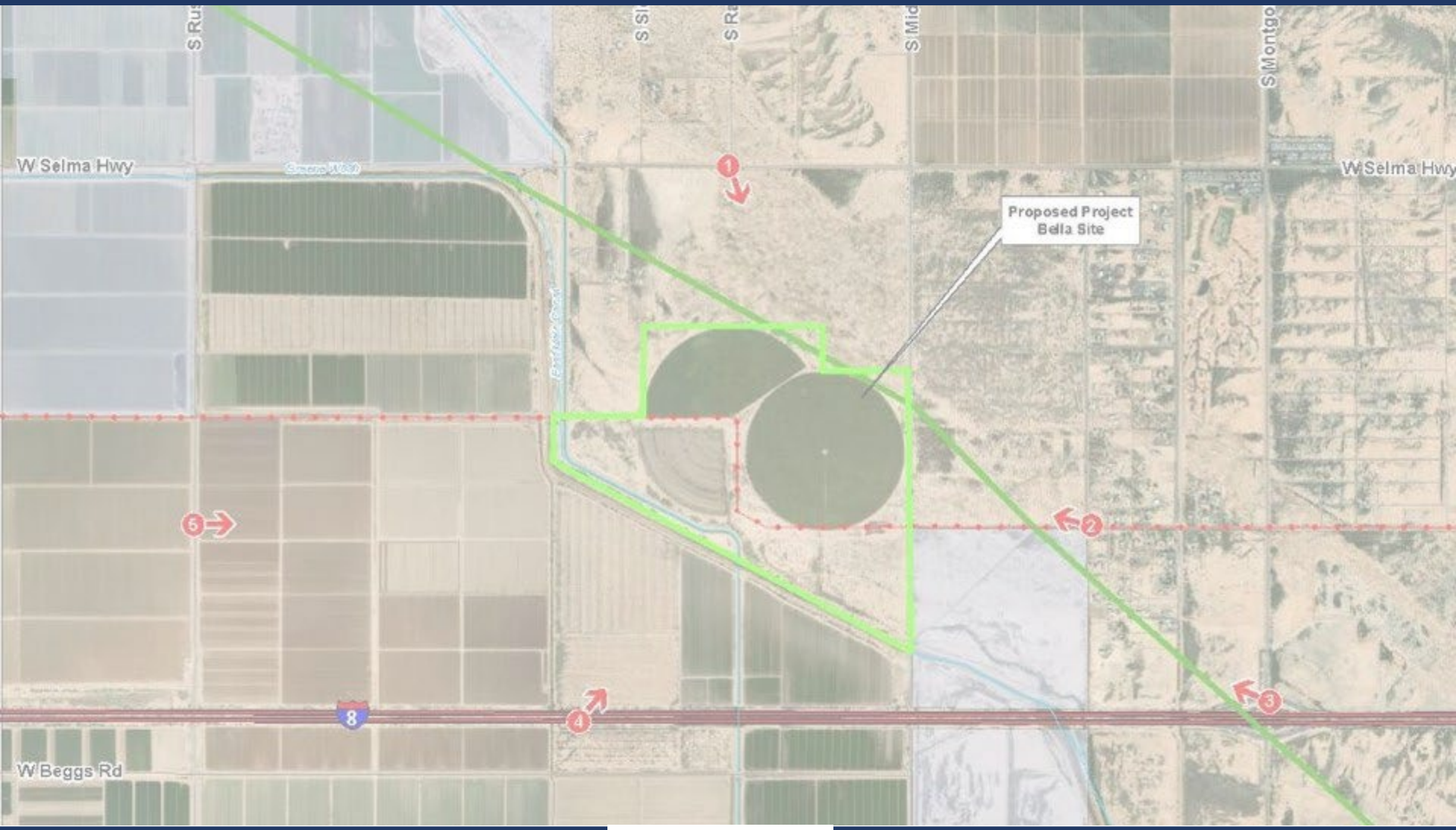
R18

Project Benefits

- Helps meet growing regional energy demand
- No need for new infrastructure
- Less land intensive than solar
- Reduces water consumption
- Minimal noise/visual impact
- Provides emergency response solution for community
- Job creation
- Substantial positive fiscal impact to County **(+$167,000,000**)

R19

Questions?


W Selma Hwy
W Selma Hwy
Proposed Project
Bella Site
W Beggs Rd
8

Significantly More Land Efficient than Solar

Pinal County Major Amendment Projects

Project "Name"	Application Reference	Acres	Solar	BESS		Total Peak MW	MW per Acre
Avantus (Ore Town Solar)	PZ PA 005-24	1,227	145	145		145	0.12
Cypress Creek (Cactus Flower)	PZ PA 007-24	2,148	270	270		270	0.13
Copia (Tap Solar)	PZ PA 009-24	1,092	1,000	1,000		1,000	0.92
Copia (Frontier East Solar)	PZ PA 011-24	318	50	300		300	0.94
Copia (Sunhill)	PZ PA 012-24	96	0	200		200	2.08
Total		**4,881**	**1,465**	**1,915**		**1,915**	0.39

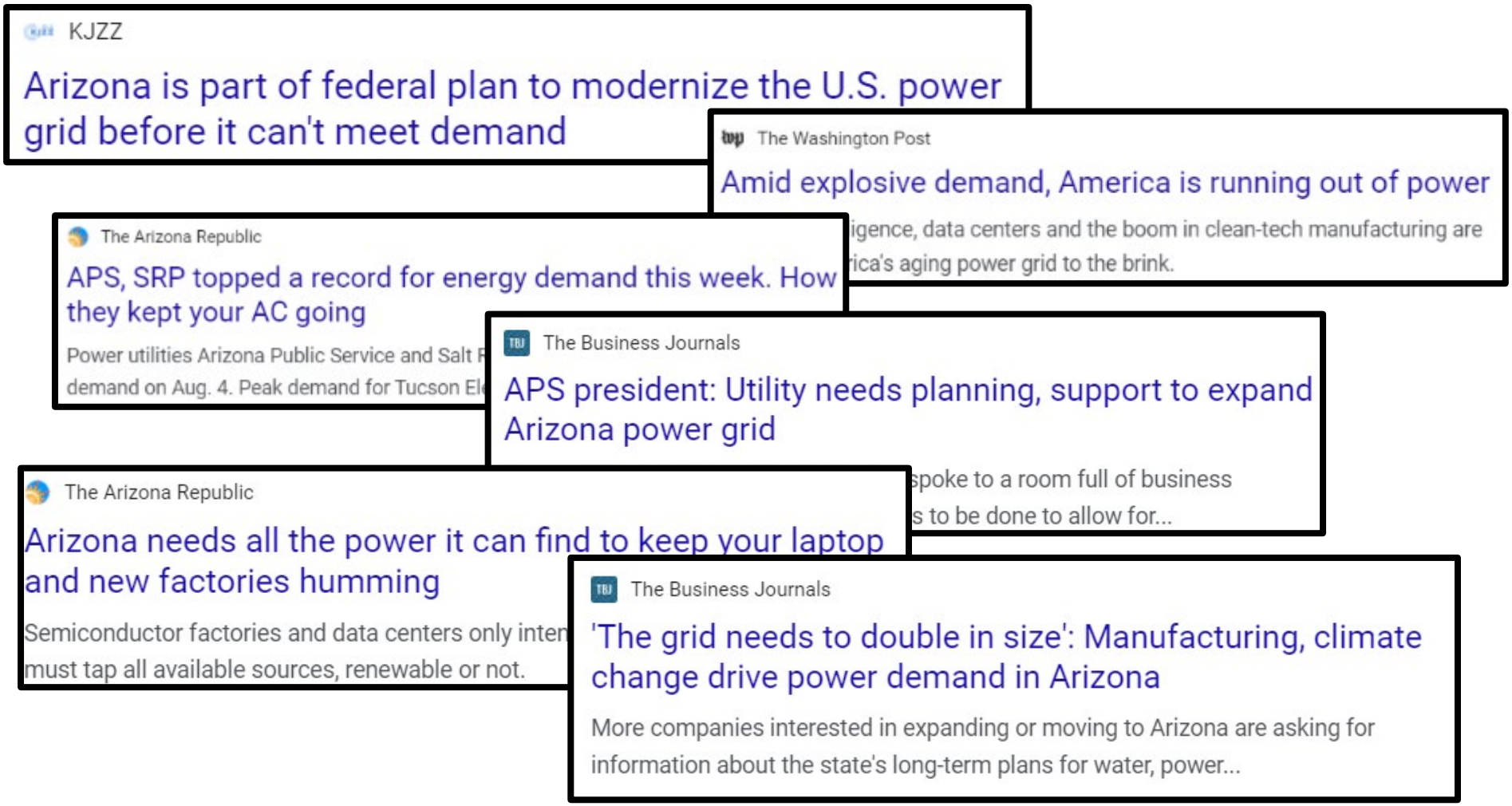
Project "Name"		Acres	Solar	BESS	Reliability Capacity	Total Peak MW	MW per Acre
Project Bella	PZ PA 008-24	350	0	440	480	928	2.65

Meets Major Comprehensive Plan Amendment Criteria

1. Needed and necessary at this location and time 
2. Will not negatively impact adjacent properties 
3. Will promote orderly growth and development of the County 
4. Compatible and consistent with the applicable goals and policies of the Pinal County Comprehensive Plan 

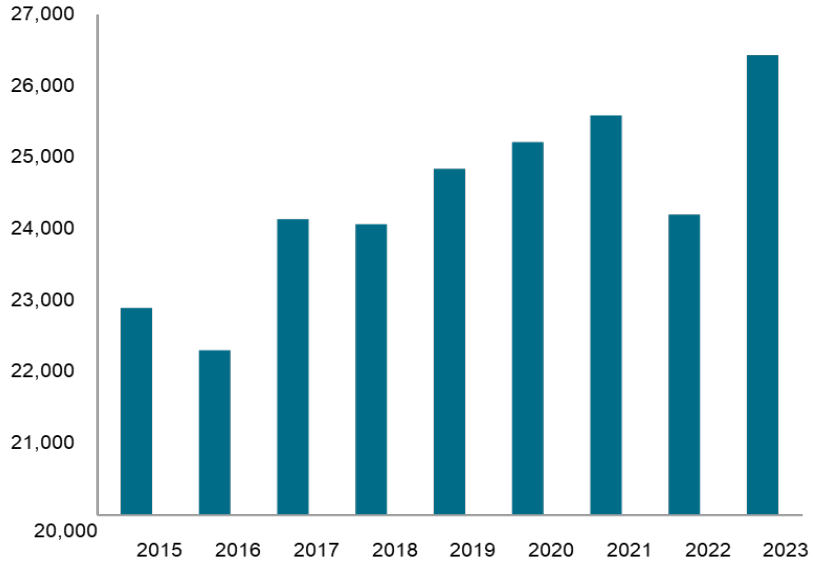
Why is Project Bella needed?

Arizona Electric Power Capacity Reaching Limit

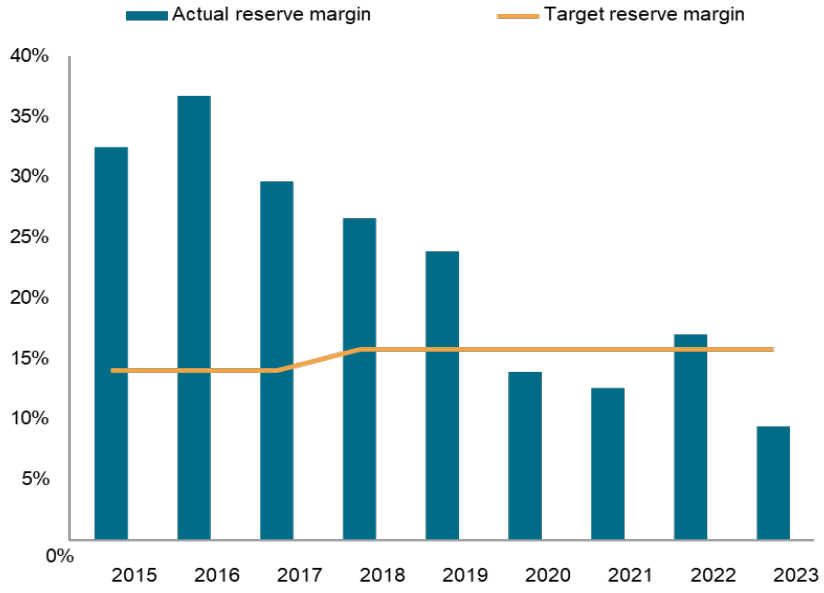


Reliability and Resiliency

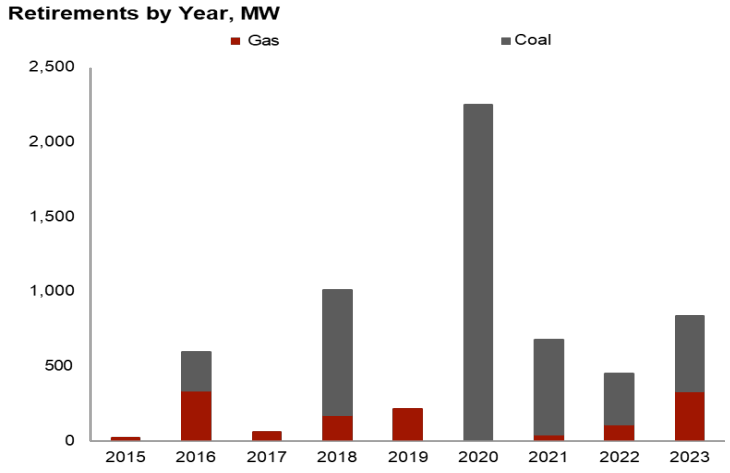
Electricity Demand:

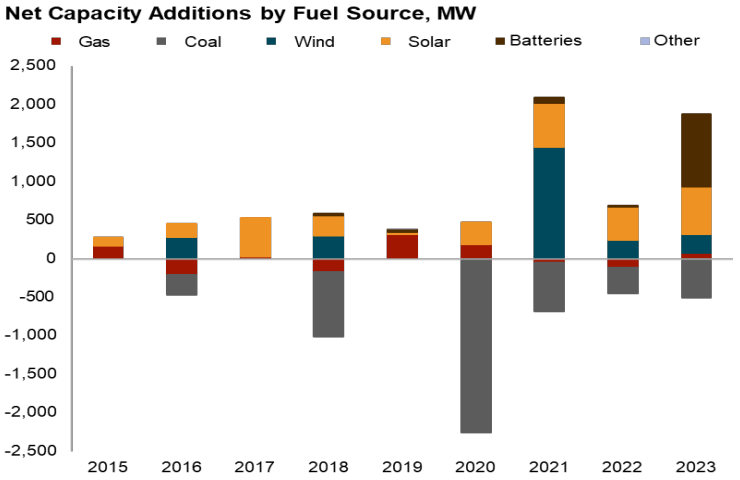


Reserve Margins:



Retirement of Coal Fired Power





With over 6 GW of thermal capacity retirements since 2015, The DSW has largely turned to renewables along with some new gas to replace thermal retirements

Data compiled March 2024. Source: S&P Global Commodity Insights

- The Southwest grid is undergoing a significant resource transition, with over 8,149 MW of baseload coal resources retiring during the period 2019–2032 to a more sustainable energy portfolio at a time in which load-growth is at historical levels.

- The retirement of these end-of-life coal facilities **cannot be reliably completed** in a medium to high-growth environment that Arizona is experiencing **without new resource adequacy generators**. To date, energy has been replaced with intermittent renewables.

- Project Bella represents a near-term development project, which can be fully commercially operational by mid-2028 and **directly contribute to reliability reserves as well as sustainability, low-carbon energy supply transformation** by providing a cost-effective, reliable electric capacity and ancillary services resource, **while embracing priority dispatch and utilization of low-carbon renewable energy.**

Renewable Energy Integration - Duck Curve

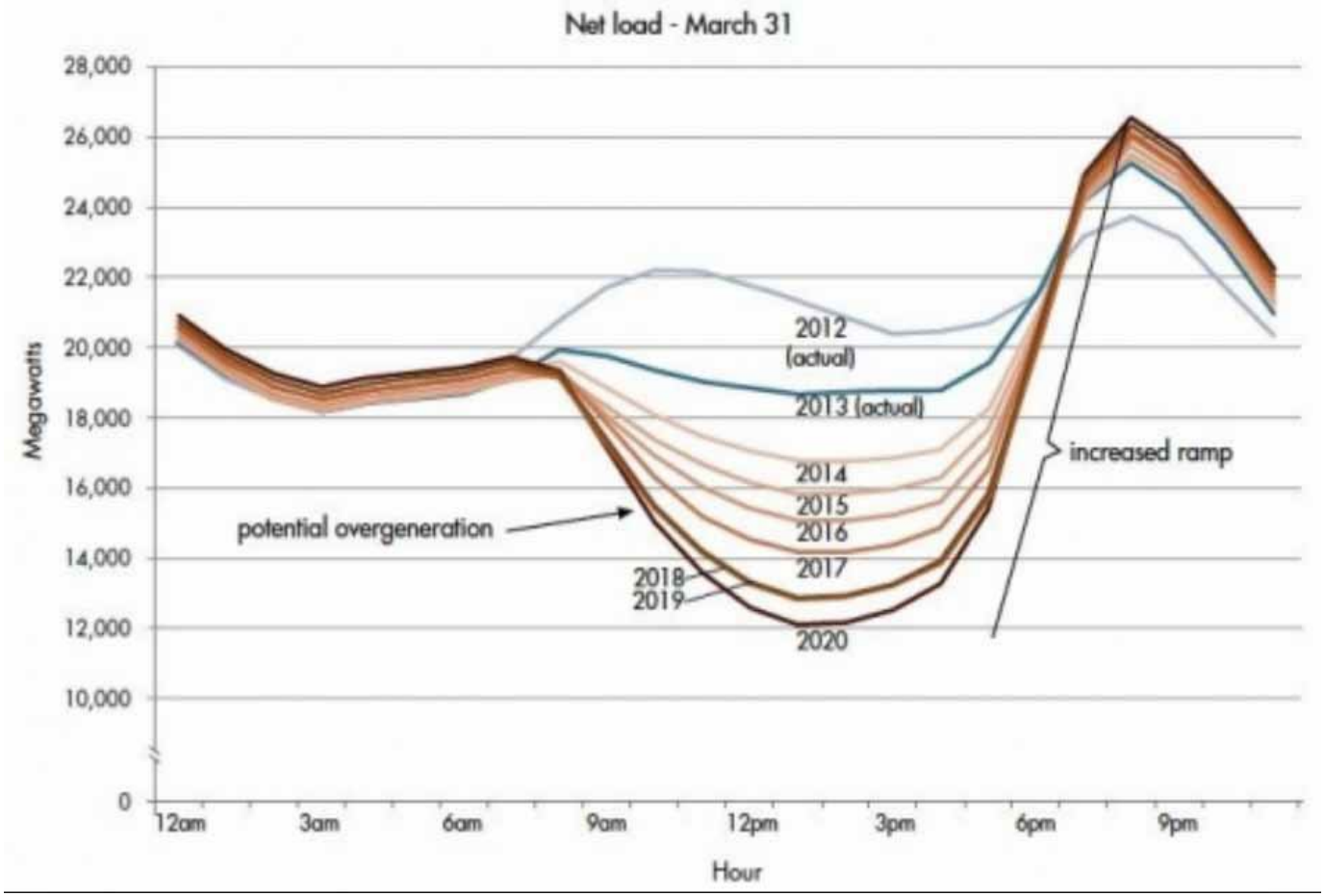
Source:
Arizona Solar Center

The Solar Generation penetration provides significant energy during the periods of 0900 to 1700 and dropping steeply by 1800.

At the same time load is increasing.

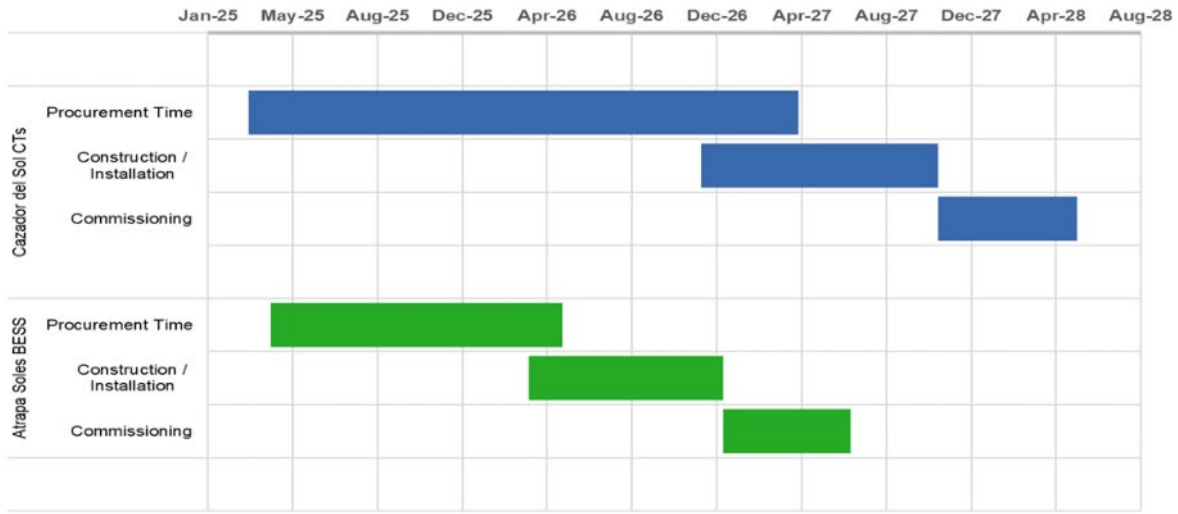
Therefore, Reliability Resources are needed to ramp as much as 16,000 MW.

This means about 10,000 MW to offset the intermittent solar decline and approximately 6,000 to meet the evening peak load from the "baseline".



Renewables have experienced strong growth in recent years as the region aims to decarbonize. Since 2015, the region has grown from 2.3 GW of solar, wind and batteries to nearly **9 GW**.

General Project Timeline (Post NTP)





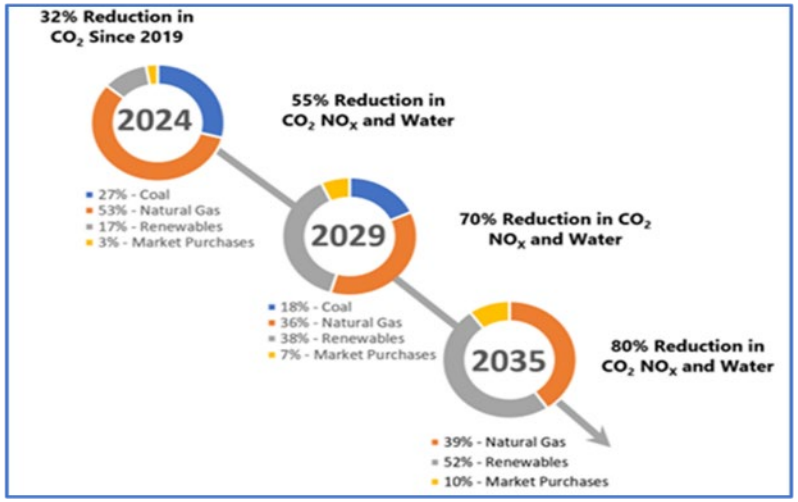


Two Projects - One Clear Focus

Achieve Sustainability Goals with Reliable and Efficient Capacity.

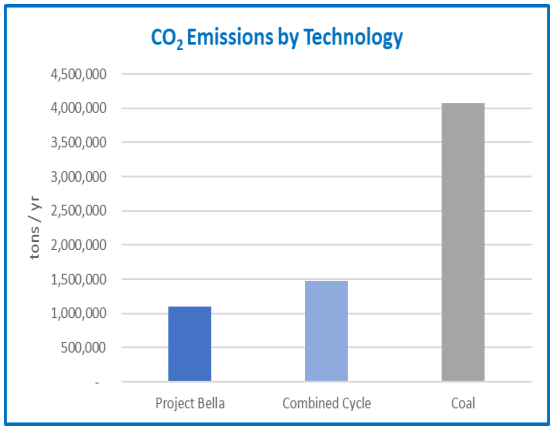
- ✓ Accommodates Renewable Energy Integration;
- ✓ Promotes the transition to electric vehicles;
- ✓ Compliments the Retirement of Coal Generation; and
- ✓ Responsibly Meets Local Energy Supply Requirements.

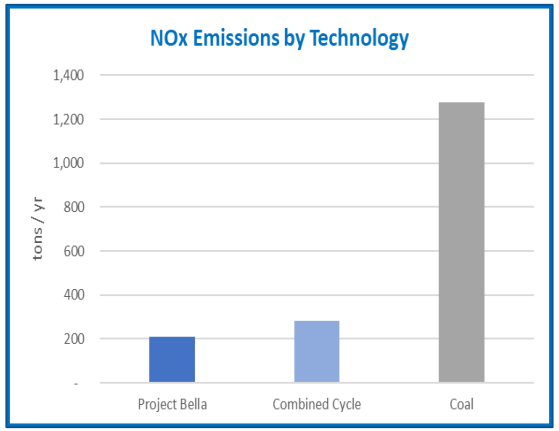
Minimal Environmental Impact

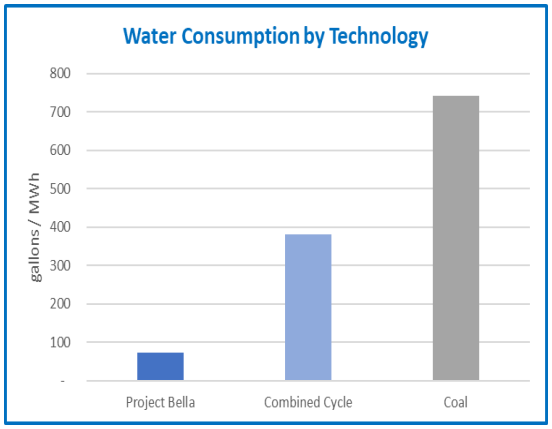


Source: TEP 2023 IRP

- ✓ **Minimal Water Consumption - 78 % less than a CCGT**
  - ✓ **10% Less water consumption than current Ag use**
- ✓ **Low Emissions (NOx and CO Control Systems)**
  - ✓ **EPA and Pinal County review completed**
- ✓ **Complements the priority utilization of renewable energy with resource adequacy capacity**
- ✓ **Provides reliability reserve margin to offset retirement of end-of-life coal units**
- ✓ **Commitment to meet rural zoning ordinance for sound**
- ✓ **Lower Stack (65 ft) – visual and noise mitigation**
- ✓ **Utilizes existing infrastructure with electrical transmission and natural gas pipeline on-site**







Representative Sounds and Noises

Table 1. Sound Levels of Representative Sounds and Noises

Source and Distance	Sound Level (dBA)	Human Response
Jet takeoff (nearby)	150	
Jet takeoff (15 m/50 feet)	140	
50-hp siren (30 m/100 feet)	130	
Loud rock concert (near stage)	120	Pain threshold
Construction noise (3 m/10 feet)	110	Intolerable
Jet takeoff (610 m/2,000 feet)	100	
Heavy truck (8 m/25 feet)	90	
Garbage disposal (0.6 m/2 feet)	80	Constant exposure endangers hearing
Busy traffic	70	
Normal conversation	60	
Light traffic (30 m/100 feet)	50	Quiet
Library	40	
Soft whisper (4.5 m/15 feet)	30	Very quiet
Rustling leaves	20	
Normal breathing	10	Barely audible
Threshold of hearing	0	

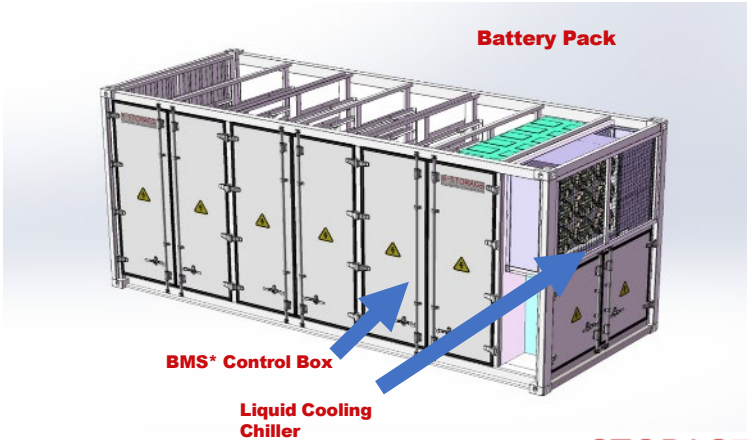
Source: Beranek (1988).

Community Outreach

- Open Houses (1 mile radius notice)
  - Virtual Open House April 29th
  - In-Person Open House April 30th
  - Virtual Open House June/July TBD
  - In-Person Open House June/July TBD
- Informational Hotline
  - **1-833-815-4853**
- Project Website
  - https://projectbellaaz.com/
- Project Social Media
  - https://www.facebook.com/ProjectBellaAZ
- ACC Siting Committee Hearings
  - August 12-16th, 2024
  - Francisco Grande Hotel and Golf Resort
- ACC Public Hearings
  - Minimum 30 days after the ACC Committee Hearings



Grid Charged Battery Energy Storage System Attributes





e-Storage Solbank lithium-ion battery storage system: self contained units that store electricity via an invertor charging process during non-peak periods in order to discharge electricity back to the electrical grid during peak periods, typically post solar generation hours.

- Durable, proven LFP battery cell for quick charge and discharge (4 hour) system managed through an active balancing battery management system to ensure continuous balancing during daily operations.

- Integrated Liquid Cooling-Heating System, designed for optimal battery temperature. Integrated multi-level BMS monitoring and fire detection, units provide timely report of battery status and fire detection, linked actions with other system components;

- BMS and Controller Integration, seamlessly integrated for real-time monitoring and issue reporting. Complete fire propagation verification from cell, module (pack) to unit level based on the latest UL 9540A: 2019 (4th Edition). Designed to meet the newest fire and safety codes. NFPA69, NFPA855 and NFPA72 compliant. Explosion prevention with gas detection, NFPA69 rated.

- Site Specific Fire Safety Design includes Emergency Response Plan (ERP); Hazard Mitigation Analysis (HMA); First responder training for fire department, AHJ, site operator, O&M teams; and Heat Flux Analysis (HFA) for verification of layout design per site conditions.

Seguro Energy Partners

- Provides Asset Management and Energy Management Services for over 3,000 MW of Operating Electrical Generation and Fuel Supply Management Services for 8,400 MW of Gas-fired Generation, Consuming approximately 1.3 Bcf / day.

- Services and Primary Commercial Activities Include:
  - Energy Infrastructure Development / Valuation / Acquisition
  - Asset Optimization / Contract Management
  - Transactional Deal Structuring / Origination / Trading
  - Physical Commodity Logistics /Operational Interface / Efficiency Enhancement.
  - Qualitative and Quantitative Analysis Embracing Market and Industry Trends / Asset Modeling & Forecasting.
  - Risk Management / Cost Reduction / Budgeting
  - Risk Governance Compliance / Financial Reporting

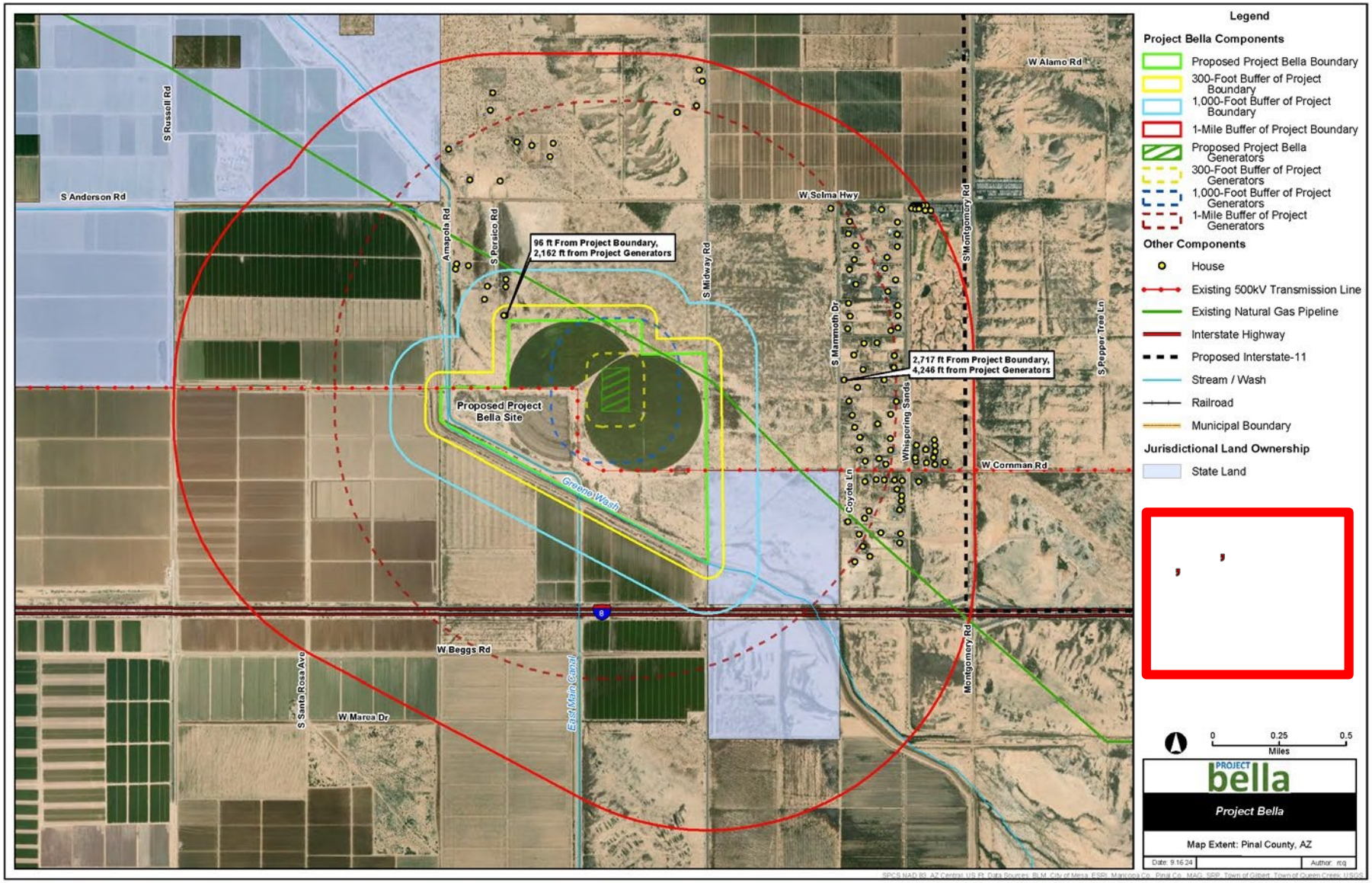
Appendix A
Demonstration of Land Use Compatibility

Appendix A demonstrates land use compatibility. Sundance and Coolidge (Pinal County) demonstrate rural life / land use compatibility in that power plants do not induce development.

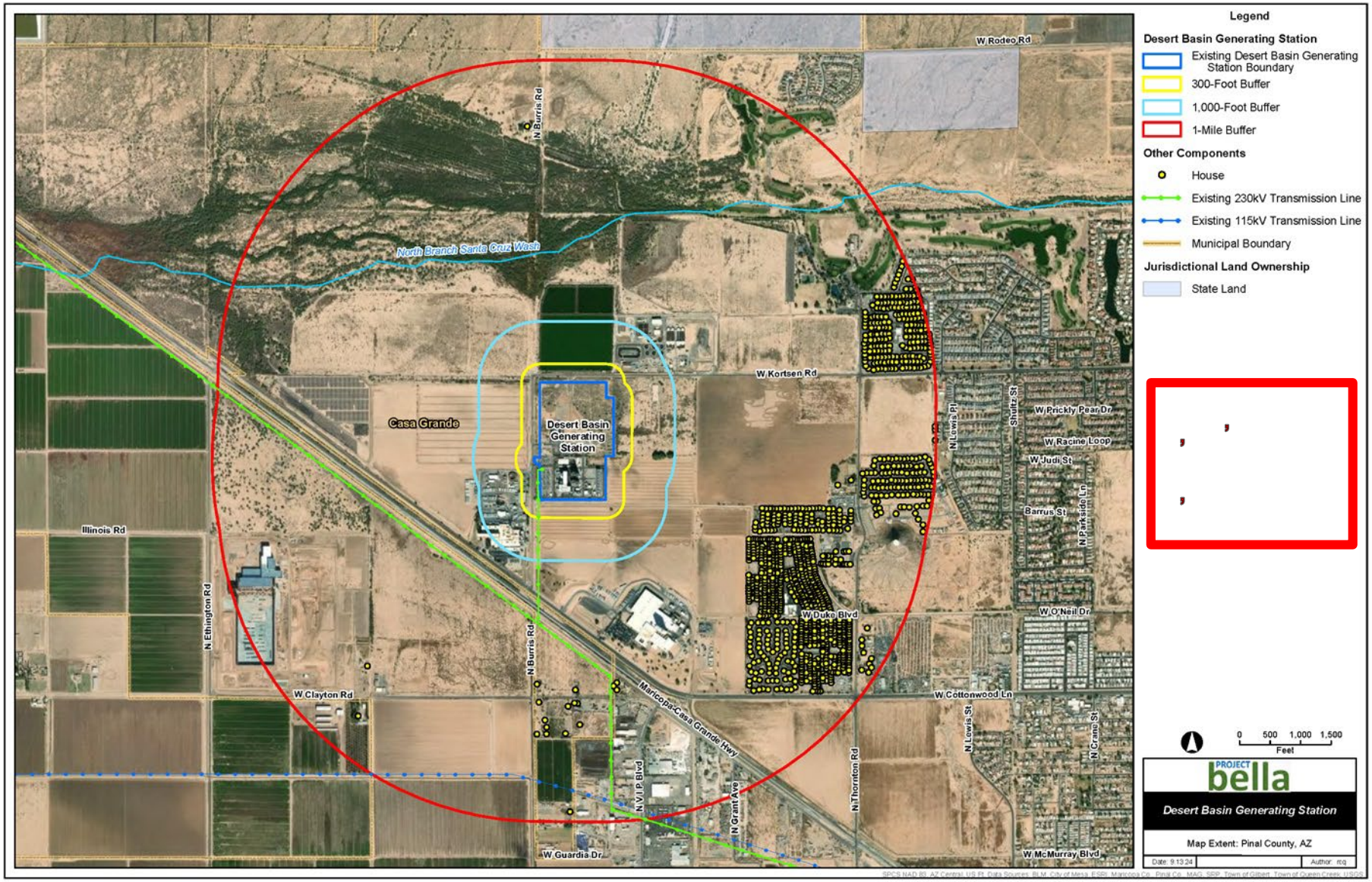
Generation such as Desert Basin (Casa Grande), Kyrene and Santan with proximity to high density residential, demonstrates that emissions from natural gas generation does not present significant human health impacts and property value is not negatively impacted.

Generating Station	Single Family Homes within 1000ft	Single Family Homes within 1 Mile
Proposed Project Bella Generators	0	58
Desert Basin Generating Station	0	1183
Sundance Power Plant	1	36
Coolidge Generation Station	15	80
Copper Crossing Solar Ranch	225	479
Kyrene Generating Station	213	6517
Santan Generating Station	405	6357

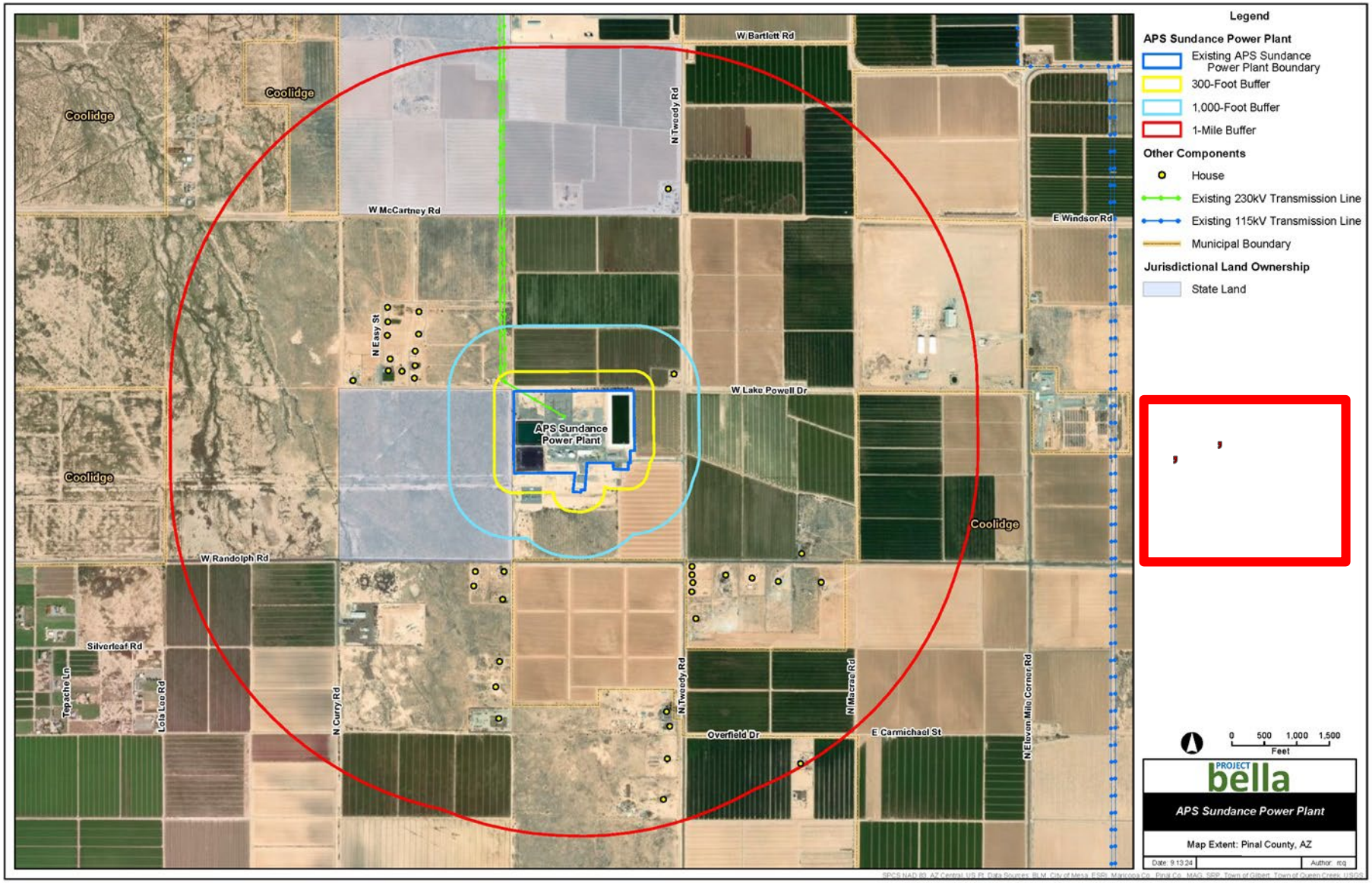
Project Bella – Proximity to Residential



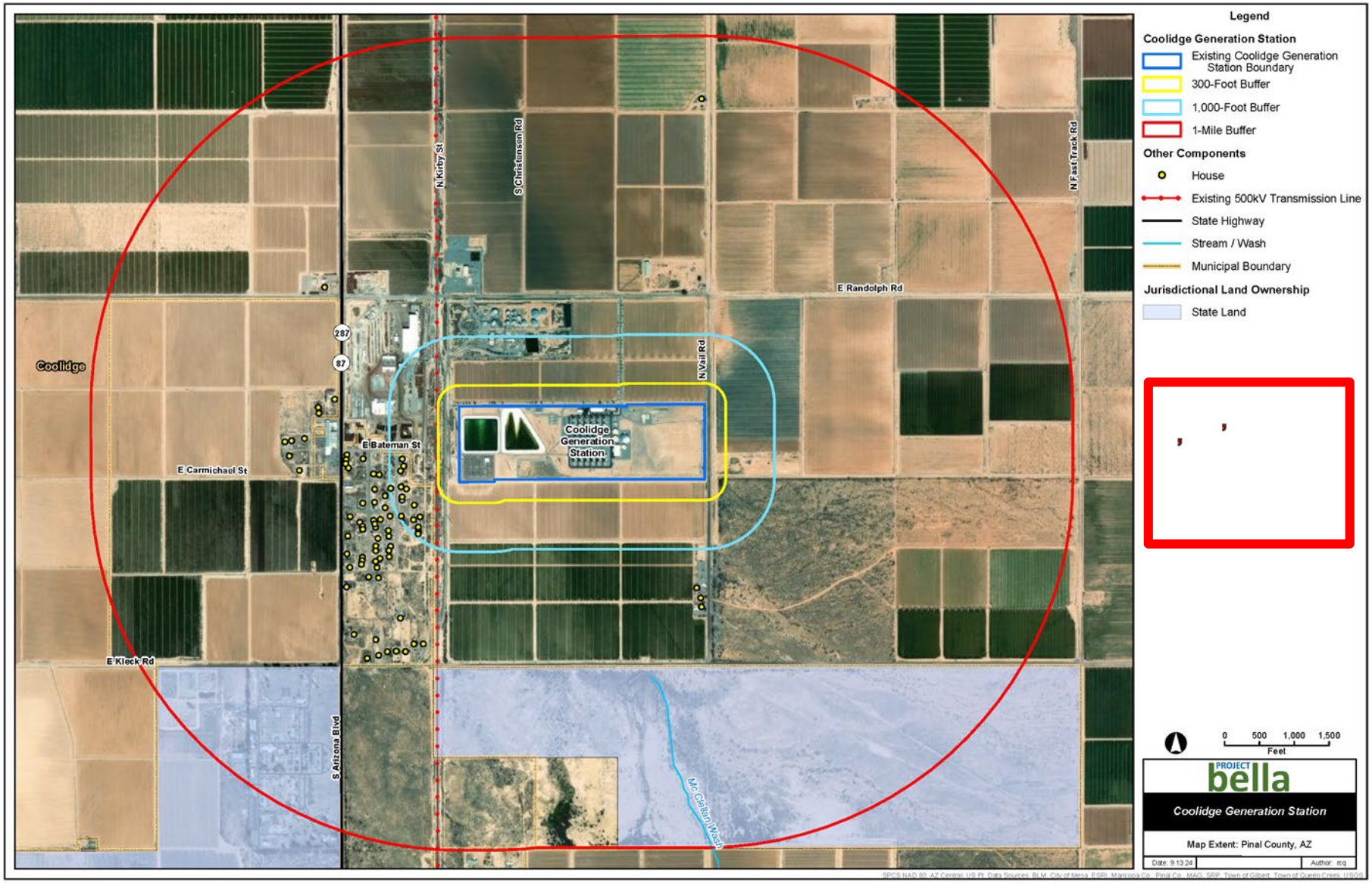
Desert Basin Generating Station – Proximity to Residential



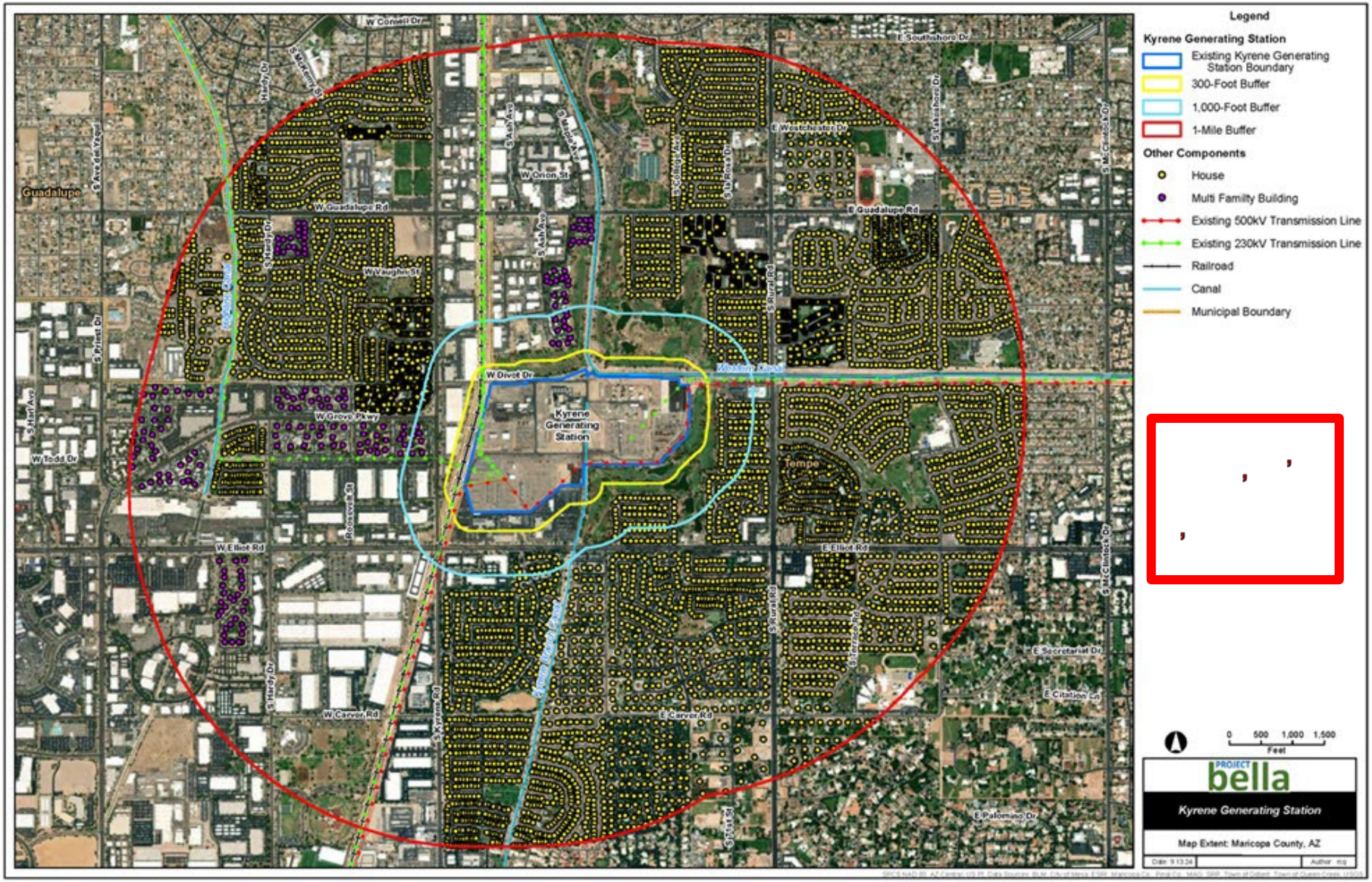
Sundance Power Plant – Proximity to Residential



Coolidge Generation Station – Proximity to Residential



Kyrene Generating Station – Proximity to Residential



Santan Generating Station – Proximity to Residential

