



MEETING DATE: NOVEMBER 15, 2023

TO: PINAL COUNTY BOARD OF SUPERVISORS

CASE NO.: **PZ-PA-006-23 (CHAPTER 7- ENERGY SECTION UPDATE)**

CASE COORDINATOR: SANGEETA DEOKAR, SENIOR PLANNER

Executive Summary:

This is a major amendment to the Pinal County Comprehensive Plan document to update Chapter 7: Environmental Stewardship, Section–Energy, Sub-Sections- Renewable Energy Sources; Energy Generation and Transmission; Goals, Objectives and Policies and Appendix D (Glossary).

If This Request is Approved:

If this major amendment to the Pinal County Comprehensive Plan is approved, the action will allow the county to be able to review and process applications received under a variety of energy sources including other renewable sources besides solar.

Staff Recommendation/Issues for Consideration/Concern:

Staff recommends approval of this request.

LEGAL DESCRIPTION: N/A

TAX PARCEL: Multiple APN's

APPLICANT: PINAL COUNTY

REQUESTED ACTION & PURPOSE: PZ-PA-006-23–PUBLIC HEARING/ACTION: Pinal County, applicant requesting approval of a Major Comprehensive Plan Amendment to the **2019 Pinal County Comprehensive Plan** to update Chapter 7: Environmental Stewardship, Section–Energy, Sub-Sections- Renewable Energy Sources; Energy Generation and Transmission; Goals, Objectives and Policies and Appendix D (Glossary).

PUBLIC COMMENT:

To date no comments in writing have been received.

PUBLIC PARTICIPATION:

P&Z Work Session:	7/21/2023, 8/9/2023
Web posting and 60 day review:	6/10/2023 to 8/12/2023
Citizen Advisory Committee:	9/07/2023
Neighborhood Meeting:	9/28/2023
Newspaper Publication:	9/28/2023 & Week of 10/23/2023

COMMUNITY DEVELOPMENT
Planning Division

OTHER REVIEW AGENCY COMMENTS:

As of the writing of this report no agency comment has been received.

COMMISSION ACTION/RECOMMENDATION (PZ-PA-006-23): At the hearing, after discussion with staff and the Commission, together with evidence presented, & public testimony the Commission voted unanimously (9-0) to recommend **approval** of **PZ-PA-006-23** based upon the record as presented with no stipulations.

*No proposed stipulations

Date prepared: 11/1/23 SD

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PINAL COUNTY PLANNING AND ZONING COMMISSION
(PO NUMBER 249810)

Regular Meeting
9:00 a.m.
Thursday, October 19, 2023
Board of Supervisors Hearing Room
135 N. Pinal Street, Florence, Arizona

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ORIGINAL PREPARED FOR:
PINAL COUNTY, ARIZONA

1 unanimously. So this case will be before us again on the 16th
2 of November and it will be publicly posted. Okay, it's 5
3 minutes until noon, what is the Commission's pleasure? We
4 have a general - one more Major General Plan Amendment case,
5 and we have another case that I believe is a 3-fer. The next
6 case is the Major General Plan Amendment on the energy
7 section.

8 ??: (Inaudible).

9 RIGGINS: I don't know. I don't know. The three
10 could take a little bit. Okay. All right, it being the lunch
11 hour, we are going to propose that we're going to adjourn and
12 reconvene this meeting at 1 p.m. to finish the rest of our
13 agenda.

14 [Break]

15 RIGGINS: (Inaudible) regular meeting (inaudible).

16 ??: (Inaudible) mic's on Chairman.

17 RIGGINS: ... on October 19, 2023 at 1:05 p.m. The
18 first case that we will hear today to the first Major
19 Comprehensive Plan Amendment, which is PZ-PA-006-23, the
20 Energy section.

21 DEOKAR: Good afternoon, Scott - Chairman and
22 Commission Members. Sangeeta Deokar, Senior Planner,
23 presenting this - one of the cases, which is the only one
24 remaining for today under the Major Comp Plan Amendments. And
25 this is the PZ-PA-006-23 updating the Chapter 7: Environmental

1 Stewardship, under which there are subsections, which are the
2 Energy section and the Renewable Energy Sources and the
3 Appendix D of the 2019 Pinal County Comprehensive Plan
4 document. The proposal is expanding the renewable energy
5 sources under that subsection to include additional categories
6 besides the solar as of now. Updating the Goals, Objectives
7 and Policies under the same chapter, and updating also the
8 Appendix D, which adds these additional terms that have been
9 added under the Renewable Energy Sources and also the Energy
10 section. Objective is to provide a comprehensive list and
11 promoting quality, safety and benefits to the Pinal County
12 residents. Expanding the toolbox and providing options under
13 various sources of energy and creating a diversity within this
14 category. Purpose is, again, ensuring projects that are
15 proposed in future that fall under the category, whether it is
16 renewable energy sources or any other energy sources can be
17 tied to the policies stated in this document. Bringing the
18 Pinal County Comprehensive Plan document up to date with
19 current trends and energy sector in the State of Arizona.
20 Some of the sources that have been used, I have shared the
21 links over here. Department of Energy, Arizona Environmental
22 Impact Assessments, US Census Data, Office of the Nuclear
23 Energy, SRP, that is also talking about the improvement
24 projects and especially the Coolidge expansion project that
25 was mentioned earlier. The Environmental Stewardship update

1 includes one of the sections, which is the Renewable Energy
2 Sources, and at this point in time, the existing document is
3 heavily talking only about the solar energy. We would like to
4 update this document to include the following sources,
5 including the solar energy, which is bioenergy, geothermal
6 energy, hydrogen, hydrogen power and wind energy. Some of the
7 images that have been shared earlier multiple times, but just
8 an overview, once again, talking about photovoltaics under the
9 solar energy and the concentrated solar thermal power systems.
10 Bioenergy is derived from organic materials called biomass,
11 and the various sources have been mentioned. The source,
12 again directly from the U.S. Energy Information
13 Administration. Some geothermal energy systems, heat
14 harnessed from beneath the earth, processes their heat,
15 geothermal cooling and heating being used. Hydrogen is
16 another source. It's an energy carrier produced from domestic
17 sources. Natural sources are gas, solar, wind, geothermal,
18 biomass, or from processes which are currently under research,
19 is electrolysis, biological, water splitting, steam methane
20 reforming. Another image that shows the hydrogen source as an
21 energy source. Hydropower. We have again talked about this
22 once again stating the same thing. We usually associate this
23 with large projects like Hoover Dam and harnessing power from
24 large water bodies and (inaudible) with technological advances
25 and researches, smaller facilities which uses micro turbines

1 take advantage of water flows in municipal water facilities or
2 irrigation ditches which an image is shown, and it is a
3 coincidence that we have a current example in the preliminary
4 stage, which is the Sacaton energy storage project, which is
5 proposed, and it's in the pipeline. It's using closed loop
6 pump storage of 150 megawatts capacity proposed along with the
7 adjacent hundred megawatt solar power plant. Just a
8 preliminary site plan that shows the use of hydropower and
9 within smaller, at a very small scale. Wind energy,
10 harnessing power for wind-driven turbines, collecting and
11 converting the kinetic energy into electricity. This is a
12 very small example, however, being used very effectively, the
13 ASU School of Sustainability. And we do have similar projects
14 that have come for inquiries at Pinal County. This is one
15 more addition that probably the Commission had not seen, and
16 this was suggested at both the Board of Supervisors and also
17 by the CAC members to include small modular reactors under the
18 energy section, and this is what I have also included as one
19 of the upcoming sources for energy. Some of the features for
20 these small modular reactors, are they are small. What I've
21 highlighted is the large and the medium and the small modular
22 reactors and the micro reactors, showing the capacities.
23 Small means one-third capacity of the traditional nuclear
24 reactors, modular, the feature being modular, they're factory
25 assembled, transported to locations difficult to build,

1 especially in rural areas where there is no connectivity, and
2 the idea of being affordable for places that require energy to
3 be connected or to have that energy. So these are standalone,
4 or they could be grid connected, which gives access to energy
5 and based on the costs. So that is one more part, which is an
6 addition in this as just mentioned as one of the sources.
7 There's an update to Appendix D which is largely to include
8 the new terms that have been included in the Chapter 7 for
9 Environmental Stewardship. I've shared the packet that shares
10 the updated Comprehensive Plan document and also the original
11 for reference to show that difference and the changes. We
12 receive no public response. We also have a recommendation
13 from the CAC committee that recommended approval with 9 to 10,
14 and staff recommends approval for this proposal. And I'm open
15 for questions and comments at this point in time.

16 RIGGINS: Commissioners, questions or comments of
17 the presentation on the rewrite of the energy sector of the
18 General Plan?

19 HARTMAN: Chairman.

20 RIGGINS: Commissioner Hartman.

21 HARTMAN: Yes, thank you, Chairman. A quick
22 question on the hydropower example you showed there.

23 DEOKAR: Yes.

24 HARTMAN: I believe you called it the Sacaton
25 Project?

1 DEOKAR: Yes.

2 HARTMAN: What's the flow of water through that in
3 terms of cubic feet per second, or gallons per minute?

4 DEOKAR: I was just trying to share that this is
5 being a sheer coincidence that we're updating the
6 Comprehensive Plan and we have (inaudible) projects that are
7 at a very initial stage. It has not been reviewed, it has
8 just been received. So I'm not aware of that, and so I do not
9 know the answer to your question.

10 HARTMAN: Okay, I was just curious because I think
11 the Chairman has mentioned in previous meetings that, you
12 know, we've lost our Central Arizona Project water. We, our
13 irrigation district has looked at it before, but we lost our
14 water and now our groundwater. But it'd be interesting to
15 know smaller flows, if that's something that's possible.

16 BILLINGSLEY: Mr. Chairman, Commissioner Hartman,
17 I'm actually aware of two different projects that we've had
18 conversations with. The first one is the one that Sangeeta
19 just showed, and that's the old open pit mine outside of Casa
20 Grande. And the concept of taking water, obviously
21 accelerating the velocity of that water - it's a big pit if
22 you've been out there and looked in it - and having a turbine
23 to collect that, then pump it back out. Like she said, we
24 don't have any specifics on it yet, but it's something that we
25 have had a conversation about. The second conversation

1 actually is the one that you just brought up. It's probably
2 about a year or so ago, but we had a conversation with one of
3 the water districts and they wanted to put micro turbines or
4 some type of infrastructure as related to the existing
5 irrigation ditch infrastructure in the County as a potential
6 option. Scottsdale is already using micro turbines in that
7 capacity to generate electricity.

8 RIGGINS: Commissioner Hartman, actually Europe has
9 been spending an enormous amount of money for at least the
10 last seven, eight, nine years building exactly those kind of
11 facilities. Generally it's Germany paying for it and
12 Switzerland owning it. What has happened is obviously they
13 put in so much solar and wind that's not reliable, they want
14 to do anything they can to create nighttime energy. Political
15 mistake. The only thing that facilitates it is enormous
16 government subsidies, because obviously the waste and
17 inefficiency is below zero by a lot. But because of political
18 decisions, that was decided to be done. A system like this,
19 absent enormous subsidies, has no use whatsoever. If there's
20 subsidies because there's a political decision to do
21 something, then yeah, something can happen. But there again,
22 we spend tax dollars on waste. So not that I have an opinion
23 on it, though. It's just my observation. So any other
24 questions? Commissioner Klob.

25 KLOB: Through the Chair. Sangeeta, thank you for

1 your presentation. I think I touched on this earlier, but I
2 mean is this intent for larger scale, small scale, individual,
3 you know, property level scale? What is kind of the root
4 intent of - ?

5 DEOKAR: So basically, all of this we did review it
6 a couple of times. It is for small scale projects that we're
7 talking about, especially these renewable ones. And also in
8 combination with others like solar (inaudible) or hydrogen
9 and, you know, in this case it both solar and the hydropower.
10 So they are small scale, and our goals, objectives, and that
11 has been updated very clearly to state that, and just remove
12 the, you know, to be able to kind of process these projects
13 which are basically small scale.

14 KLOB: So kind of where I was going with that
15 question is to tie on what Riggins had mentioned, things being
16 subsidized so much, you know, for a lot of these programs to,
17 you know, take off - some are more successful than others -
18 where is the incentive for a builder or a developer to come in
19 and add this to - and the expense involved - to a subdivision,
20 to a commercial development, to bring - and I'm actually a fan
21 of alternative energy needs. I'm just - what I see so often
22 is we go through these exercises, but if there's nothing for
23 the builder who is outlying the initial cash, whether it be
24 tax incentives or speed, you know, speeding through the
25 approval processes, permitting, things like that, they're not

1 gonna do it. And it's not as good as the paper it's written
2 on.

3 DEOKAR: I really appreciate what you're talking
4 about, and the whole intent of this proposal is first to
5 recognize this in the Comprehensive Plan. Yes, what you're
6 saying is, can be a step next to build on to see how if we
7 have to accommodate, or kind of look at how developers could
8 look at this, and look at the incentives or ways to negotiate,
9 that's a next step. This project, or this proposal was first
10 recognizing - which is not there in the Comprehensive Plan at
11 this point in time. So being first step that was the first -
12 the reason for us to bring it up as a policy document again.

13 BILLINGLSEY: Mr. Chairman, Mr. Klob. I just want
14 to, I want to provide some clarification. Really, this text
15 amendment is about putting tools in the toolbox. It's not
16 encouragement, it's not incentivization. Oftentimes, as
17 planners - and it happens to us all the time in our department
18 - people ask us questions or want us to accommodate a certain
19 type of development that we don't have any rules for, and
20 we're not sure what to do with it, it makes it more difficult
21 for us. Last year we brought, I won't say a similar
22 amendment, Chairman, but last year we brought a Comp Plan
23 amendment forward to add some of these categories, and what we
24 heard from the Planning and Zoning Commission was, it sounds
25 like we're trying to encourage this. It sounds like we're

1 trying to incentivize it in some way. That's not the intent.
2 So when we wrote it this year, we made sure that it's
3 perfectly clear that we're just adding tools to the toolbox,
4 so if somebody wants to come in and do a subdivision, if they
5 choose financially to do it and include those small wind
6 turbines like she showed at ASU, we actually know what to do
7 in relation to the Comp Plan and whether it requires a Comp
8 Plan Amendment or not, because it's really not covered in the
9 existing Comp Plan. It just talks to solar and not some of
10 these alternate technologies. So one of the things that the
11 long standing Commissioners recognize is our list got longer
12 from last year to this year, and when it came down to what do
13 we put on the list, the recommendation that I gave to Sangeeta
14 and staff was go to the Department of Energy, see what they've
15 got, let's just be consistent with the Department of Energy in
16 terms of existing technologies and emerging technologies.
17 Let's get them in the plan just so we have those tools in the
18 toolbox. If that makes sense.

19 KLOB: Yeah. And I recognize that and appreciate
20 that, thank you. It still comes down to this is great and I
21 agree that we probably need some type of text to fall back on,
22 but the reality of it being used without some level of
23 incentive is probably slim to none.

24 DEOKAR: Sure, point noted and we will definitely
25 look into the - if it is - requires more analysis and

1 processes in place to move forward in that direction,
2 definitely look into that, too.

3 KLOB: Thank you.

4 DEOKAR: At this point, I also would like to
5 appreciate the Commission, especially the Chair, to have
6 reviewed this document and ensuring that we are definitely not
7 looking at incentivizing these projects, but looking at this
8 as what direct - Brent just talked about, using this as a
9 tool, but making this more as truly comprehensive to include
10 all of this as part of the document and being at par with
11 other counties and the State.

12 RIGGINS: Commissioners, any other questions or
13 comments? I have one comment to make. I took the time to go
14 line by line through what was offered up here and found it to
15 be absolutely identical line for line to what we all agreed in
16 our last meetings, and negotiations and discussions, it is
17 exactly as we approved it at that time. The only change is
18 the small modular nuclear energy component that the Citizens
19 Advisory Committee stuck in there. I wish they had asked to
20 also put a large scale full nuclear component in there too,
21 because I don't see why that isn't part of it. But again,
22 such a interesting political world energy is anymore. But
23 we'll stay out of that. I feel that this document truly
24 underwent a great deal of scrutiny and compromise, negotiation
25 and good work by all people concerned. And there are plenty

1 of things that I can besmirch it for, but I won't because
2 there's a reason for the inclusions of certain things in
3 there, even though in this County I don't see how they apply
4 in any way, shape or form, but as long as they do no harm,
5 then it's fine. And that's how we'll try to approach it as we
6 go forward. But I can state unequivocally that this is
7 absolutely the identical document that we all decided that we
8 were finished with. That's what was brought back. So just to
9 make sure that we all know that it has not changed. So any
10 other questions of Sangeeta? Well, there none being, we will
11 go ahead and open up this meeting to the public and ask if
12 there is anyone in the audience who would like to come up and
13 speak to this case. Anybody at all? And there none being,
14 we'll go ahead and close the public participation portion of
15 the case, and I will direct the Commission to either question
16 staff, or comments to staff, or discussion among ourselves, or
17 if we're prepared for a motion, that would be appropriate as
18 well. Commissioner Hartman.

19 HARTMAN: Mr. Chairman, I'll make a motion to
20 approve PZ-PA-006-23 as presented.

21 RIGGINS: And forward to the Board of Supervisors?

22 HARTMAN: And forward on for - recommend it to the
23 Board of Supervisors.

24 RIGGINS: For approval.

25 HARTMAN: For approval.

1 RIGGINS: Okay, that's a motion, do we have a
2 second? Commissioner Mennenga - Vice Chair Mennenga seconds.
3 All those in favor signify by saying aye.

4 COLLECTIVE: Aye.

5 RIGGINS: Any opposed? Then it passes unanimously.

6 DEOKAR: Thank you.

7 RIGGINS: So our last case is three cases, it's a
8 triple, is it not?

9 BAK: Correct.

10 RIGGINS: Okay. So we have three case numbers, we
11 will hear them together, but then we will need to vote on them
12 separately. I need to find it.

13 BAK: Okay, good afternoon Mr. Chair, Commissioners.
14 PZ-PA-007-23, PZ-036-23, and lastly, PZ-PD-011-23, known as
15 Ironwood & Ocotillo. The first case is a Non-Major
16 Comprehensive Plan Amendment to redesignate 38.16 acres from
17 Suburban Neighborhood land use designation to Community Center
18 land use. Second case is to rezone from Single Residence CR-3
19 on 17.71 acres and General Business CB-2 on 20.45 acres to
20 Multiple Residence zoning district to allow a mixed use
21 development plan. Lastly, is approval of a Planned Area
22 Development Overlay District on 95.23 acres to allow more
23 flexible standards. This property is generally located
24 southeast of Ocotillo Road and Gantzel. Owner is Ocotillo &
25 Ironwood Holdings, and Brennan Ray here present is with Burch

NOTICE OF PUBLIC HEARING BY THE PINAL COUNTY BOARD OF SUPERVISORS AT 9:30 A.M. ON THE **15th** DAY OF **NOVEMBER, 2023**, IN THE PINAL COUNTY ADMINISTRATIVE COMPLEX BUILDING A, ADMINISTRATIVE HEARING ROOM, FLORENCE, ARIZONA, TO CONSIDER THE FOLLOWING REQUEST FOR A MAJOR AMENDMENT TO THE 2019 PINAL COUNTY COMPREHENSIVE PLAN:

PZ-PA-006-23–PUBLIC HEARING/ACTION: Pinal County, requesting approval of a Major Comprehensive Plan Amendment to the 2019 **Pinal County Comprehensive Plan** to amend the text of **Chapter 7, Environmental Stewardship, Section: Energy, Sub-section- Renewable Energy Sources, and Appendix D**. The proposed amendment will modify the referenced chapter and provide to the Comprehensive Plan a guiding framework of Goals, Objectives, and Policies, for many Energy applications at different installation scales for Pinal County residents.

ALL PERSONS INTERESTED IN THIS MATTER MAY APPEAR AT THE PUBLIC HEARING AT THE DATE, TIME AND PLACE DESIGNATED ABOVE.

DOCUMENTS PERTAINING TO THIS CASE CAN BE FOUND ON THE NOTICE OF HEARING PAGE FOR THE P&Z COMMISSION AT:

<https://www.pinal.gov/236/Notice-of-Hearings>

DATED this **20st** day of **October 2023**, Pinal County Community Development Dept.

TO QUALIFY FOR FURTHER NOTIFICATION IN THIS LAND USE MATTER YOU MUST FILE WITH THE PLANNING DEPARTMENT A WRITTEN STATEMENT OF SUPPORT OR OPPOSITION TO THE SUBJECT APPLICATION. YOUR STATEMENT MUST CONTAIN THE FOLLOWING INFORMATION:

- 1) Planning Case Number (see above)
- 2) Your name, address, telephone number and property tax parcel number (Print or type)
- 3) A brief statement of reasons for supporting or opposing the request
- 4) Whether or not you wish to appear and be heard at the hearing

WRITTEN STATEMENTS MUST BE FILED WITH:
PINAL COUNTY COMMUNITY DEVELOPMENT DEPARTMENT
PO BOX 2973 (85 N FLORENCE ST)
FLORENCE, AZ 85132

NO LATER THAN 5:00 PM ON NOVEMBER 3, 2023.

Contacts for this matter: Sangeeta Deokar, Senior Planner
E-mail Address: sangeeta.deokar@pinal.gov
Phone: # (520) 866-6641 Fax: (520) 866-6530

Anything below this line is not for publication.

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1 Memo Bill Period 10/2023		2 Advertiser/Client Name PINAL COUNTY COMMUNITY DEVELOP	
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21 Current Net Amount Due .00	22 30 Days .00	60 Days .00	Over 90 Days .00
4 Page Number 1	5 Memo Bill Date 10/24/23	6 Billed Account Number 12870 CHRIS.	7 Advertiser/Client Number 12870

8 Billed Account Name and Address PINAL COUNTY COMMUNITY DEVELOPMENT ATTN: ALICIA MENDEZ P.O. BOX 2973 FLORENCE AZ 85132		Amount Paid: Comments: Ad #: 183381
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COUNTY OF PINAL

} ss.

Affidavit of Publication

NOTICE OF PUBLIC HEARING BY THE PINAL COUNTY BOARD OF SUPERVISORS AT 9:30 A.M. ON THE 15th DAY OF NOVEMBER, 2023, IN THE PINAL COUNTY ADMINISTRATIVE COMPLEX BUILDING A, ADMINISTRATIVE HEARING ROOM, FLORENCE, ARIZONA, TO CONSIDER THE FOLLOWING REQUEST FOR A MAJOR AMENDMENT TO THE 2019 PINAL COUNTY COMPREHENSIVE PLAN:

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DATED this 20th day of October 2023, Pinal County Community Development Dept.

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WRITTEN STATEMENTS MUST BE FILED WITH: PINAL COUNTY COMMUNITY DEVELOPMENT DEPARTMENT PO BOX 2973 (85 N FLORENCE ST)

FLORENCE, AZ 85132 NO LATER THAN 5:00 PM ON NOVEMBER 3, 2023. Contacts for this matter: Sangeeta Deokar, Senior Planner E-mail Address: sangeeta.deokar@pinal.gov Phone: # (520) 866-6641 Fax: (520) 866-6530 No. of publications: 1; date of publication: Oct. 26, 2023.

Kara K. Cooper, first being duly sworn deposes and says: That he/she is a native born citizen of the United States of America, over 21 years of age, that I am an agent and/or publisher of the Pinal Central Dispatch, a newspaper section published at Casa Grande, Pinal County, Arizona, Thursday of each week; that a notice, a full, true and complete printed copy of which is hereunto attached, was printed in the regular edition of said newspaper, and not in a supplement thereto, for ONE issue. The publications thereof having been on the following date:

10/26/2023

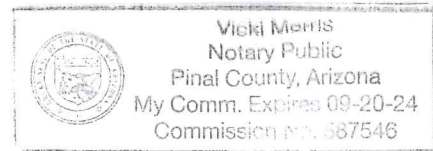
PINAL CENTRAL DISPATCH

By Kara K. Cooper agent and/or publisher of the Pinal Central Dispatch

Sworn to before me this 2nd day of Nov. A.D., 2023

Vicki Morris

Notary Public in and for the County Of Pinal, State of Arizona



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This is not an invoice

Order # 0005849636 # of Affidavits: 1

P.O # 249811

Issues Dated:

10/26/23


**STATE OF WISCONSIN
COUNTY OF BROWN } SS.**

I, being first duly sworn, upon oath deposes and says: That I am the legal clerk of the Arizona Republic, a newspaper of general circulation in the counties of Maricopa, Coconino, Pima and Pinal, in the State of Arizona, published weekly at Phoenix, Arizona, and that the copy hereto attached is a true copy of the advertisement published in the said paper in the issue(s) dated indicated.



Sworn to before me this

26 TH day of
OCTOBER 2023


Notary Public
My Commission expires: 9/19/25

NOTICE OF PUBLIC HEARING BY THE PINAL COUNTY BOARD OF SUPERVISORS AT 9:30 A.M. ON THE 15th DAY OF NOVEMBER, 2023, IN THE PINAL COUNTY ADMINISTRATIVE COMPLEX BUILDING A, ADMINISTRATIVE HEARING ROOM, FLORENCE, ARIZONA, TO CONSIDER THE FOLLOWING REQUEST FOR A MAJOR AMENDMENT TO THE 2019 PINAL COUNTY COMPREHENSIVE PLAN:

P Z - P A - 0 0 6 - 2 3 - P U B L I C HEARING/ACTION: Pinal County, requesting approval of a Major Comprehensive Plan Amendment to the 2019 Pinal County Comprehensive Plan to amend the text of Chapter 7, Environmental Stewardship, Section: Energy, Sub-section: Renewable Energy Sources, and Appendix D. The proposed amendment will modify the referenced chapter and provide to the Comprehensive Plan a guiding framework of Goals, Objectives, and Policies, for many Energy applications at different installation scales for Pinal County residents.

ALL PERSONS INTERESTED IN THIS MATTER MAY APPEAR AT THE PUBLIC HEARING AT THE DATE, TIME AND PLACE DESIGNATED ABOVE.

DOCUMENTS PERTAINING TO THIS CASE CAN BE FOUND ON THE NOTICE OF HEARING PAGE FOR THE P&Z COMMISSION AT: <https://www.pinal.gov/236/Notice-of-Hearings>

DATED this 20th day of October 2023, Pinal County Community Development Dept.

TO QUALIFY FOR FURTHER NOTIFICATION IN THIS LAND USE MATTER YOU MUST FILE WITH THE PLANNING DEPARTMENT A WRITTEN STATEMENT OF SUPPORT OR OPPOSITION TO THE SUBJECT APPLICATION. YOUR STATEMENT MUST CONTAIN THE FOLLOWING INFORMATION:

- 1) Planning Case Number (see above)
 - 2) Your name, address, telephone number and property tax parcel number (Print or type)
 - 3) A brief statement of reasons for supporting or opposing the request
 - 4) Whether or not your wish to appear and be heard at the hearing
- WRITTEN STATEMENTS MUST BE FILED WITH:
PINAL COUNTY COMMUNITY DEVELOPMENT DEPARTMENT
PO BOX 2973 (85 N FLORENCE ST)
FLORENCE, AZ 85132
NO LATER THAN 5:00 PM ON NOVEMBER 3, 2023.

Contacts for this matter: Sangeeta Deokar, Senior Planner
E-mail Address: sangeeta.deokar@pinal.gov
Phone: # (520) 866-6641
Fax: (520) 866-6530
Pub: Oct 26, 2023

VICKY FELTY
Notary Public
State of Wisconsin

PZ-PA-006-23



MEETING DATE: OCTOBER 19, 2023

TO: PINAL COUNTY PLANNING AND ZONING COMMISSION

CASE NO.: **PZ-PA-006-23 (CHAPTER 7- ENERGY SECTION UPDATE)**

CASE COORDINATOR: SANGEETA DEOKAR, SENIOR PLANNER

Executive Summary:

This is a major amendment to the Pinal County Comprehensive Plan to update Chapter 7: Environmental Stewardship, Section–Energy, Sub-Section- Renewable Energy Sources, and Appendix D.

If This Request is Approved:

If this major amendment to the Pinal County Comprehensive Plan is approved, the action will allow the county to be able to review and process applications received under renewable energy sources besides solar.

Staff Recommendation/Issues for Consideration/Concern:

Staff recommends approval of this request.

LEGAL DESCRIPTION: N/A

TAX PARCEL: Multiple APN's

APPLICANT: PINAL COUNTY

REQUESTED ACTION & PURPOSE: **PZ-PA-006-23–PUBLIC HEARING/ACTION:** Pinal County, applicant requesting approval of a Major Comprehensive Plan Amendment to the **2019 Pinal County Comprehensive Plan** to update Chapter 7: Environmental Stewardship, Section–Energy, Sub-Section- Renewable Energy Sources, and Appendix D.

PUBLIC COMMENT:

To date no comments in writing have been received.

PUBLIC PARTICIPATION:

P&Z Work Session:	7/21/2023, 8/9/2023
Web posting and 60 day review:	6/10/2023 to 8/12/2023
Citizen Advisory Committee:	9/07/2023
Neighborhood Meeting:	9/28/2023
Newspaper Publication:	9/28/2023

OTHER REVIEW AGENCY COMMENTS:

As of the writing of this report no agency comment has been received.

PLAN AMENDMENT DISCUSSION:

The Pinal County Comprehensive Plan under Chapter 7, Environmental Stewardship, subsection Energy Element, states data that has not been updated for last 10+ years. Also subsection of Renewable Energy Sources currently includes only solar energy as a renewable source.

This application for Comprehensive Plan amendment proposes updates to information related to energy consumed in Arizona, and Pinal County with population data as shared by the U.S. Census Board. The Renewable Energy sources has been updated to include other renewable energy sources besides Solar like Bioenergy, Geothermal, Hydrogen, Hydropower and Wind Energy. With the increase in research and improvements in technology, along with incentives from federal and state government, there has been increase in project proposals under renewable energy. This amendment would help Pinal county review and assess proposals under the other renewable energy sources besides Solar.

In addition, Pinal County proposes to update the Appendix D: Glossary to include additional terms included in the Chapter 7 of the Comprehensive plan document.

The proposed Major Comprehensive Plan Amendment represents:

- A step towards expanding other renewable energy sources, besides Solar through Land-use planning under Chapter 7, Environmental Stewardship, subsection Energy Element Renewable Energy Sources
- An opportunity to bring up-to-date the renewable energy Goals, Objectives, and Policies.
- An opportunity to also update outdated information and reflect the current date related to energy usage and population.
- Update Appendix D: Glossary to include additional terms in the vocabulary of the Comprehensive Plan document.

Proposed Updates: Changes to text have been on Pgs. 281, 283, 284, 285, 286, 287, 288, 289, 290, 294 and Appendix D: Glossary

Following are the links to the websites referred to for updating the document:

1. <https://www.eia.gov/state/print.php?sid=AZ#:~:text=In%202022%2C%2099%25%20of%20Arizona's, and%20petroleum%2C%20supplied%20the%20rest>
2. <https://www.eia.gov/state/rankings/?sid=AZ#series/12>
3. <https://azmag.gov/Programs/Maps-and-Data/Census-2020>
4. <https://www.energy.gov/ne/advanced-small-modular-reactors-smrs>
5. <https://www.srpnet.com/grid-water-management/grid-management/improvement-projects/coolidge-expansion-project-faq>

STAFF RECOMMENDATION:

After a detailed review of the request, Pinal County Comprehensive Plan and Pinal County Development Services Code, staff recommends approval of this request.

However, in addition to staff recommendations, should the Planning and Zoning Commission find, after the presentation of the applicant and together with the testimony and evidence presented at the public hearing, that this Major Comprehensive Plan amendment is needed and necessary at this location and time, will not negatively impact adjacent properties, will promote orderly growth and development of the County and will be compatible and consistent with the applicable goals and policies of the Pinal County Comprehensive Plan, then, staff recommends that the Planning and Zoning Commission forward PZ-PA-006-23, to the Board of Supervisors with a favorable recommendation.

If the Planning and Zoning Commission cannot find for all of the factors listed above, then, staff recommends that the Planning and Zoning Commission forward this case to the Board of Supervisors with a recommendation of denial.

CITIZENS ADVISORY COMMITTEE ACTION:

After a detailed discussion and decision, at the public hearing, the Citizen’s Advisory Committee voted 9-0 to recommend approval of case PZ-PA-006-23 with the following recommendation:

- To add Micro Nuclear Systems- Small Modular Reactors (SMR’s) with micro reactors under the Energy Generation section.

Date Prepared: 09/28/23 SD



PROCEDURE AND APPLICATION FOR A PROPOSED NON-MAJOR COMPREHENSIVE PLAN AMENDMENT

- A. Attend a Concept Review (Zoning pre-application (Z-PA)) meeting with the Planning Department and affected County agencies.
- B. File an application and all required supporting documentation for a Comprehensive Plan Amendment. Please use the attached application forms.
- C. Public hearing before the Planning Commission with Commission recommendation to the Board of Supervisors. Time frame is approximately 10 to 15 weeks from application acceptance by the Planning Department.
- D. Public hearing, (approximately 4 to 8 weeks after Planning Commission hearing), before the Board of Supervisors.

PROCEDURE FOR A PROPOSED MAJOR COMPREHENSIVE PLAN AMENDMENT

- A. Attend a Concept Review (Zoning Pre-Application (Z-PA)) meeting with the Planning Department and affected County agencies.
- B. File an application and all required supporting documentation for a Comprehensive Plan Amendment. Please use the attached application forms.
- C. Public meeting with the Citizens Advisory Committee.
- D. Public hearing before the Planning Commission with Commission recommendation to the Board of Supervisors.
- E. Public hearing before the Board of Supervisors.

*Public hearing schedule will be made available in June.

FEE SCHEDULE FOR MAJOR AND NON-MAJOR AMENDMENTS

- A. Major Comprehensive Plan Amendment: \$5,091.00
- B. Non-major Comprehensive Plan Amendment:
 - a. 0-499 mailouts: \$4,478.00
 - b. 500 or more mailouts: \$4,824.00
 - c. With accompanying zone change: \$3,354.00

COMMUNITY DEVELOPMENT
Planning Division



PINAL COUNTY
WIDE OPEN OPPORTUNITY

APPLICATION FOR A COMPREHENSIVE PLAN AMENDMENT IN AN UNINCORPORATED AREA OF PINAL COUNTY, ARIZONA
(All Applications Must Be Typed or Written in Ink)

Comprehensive Plan Amendment unincorporated & Property Information:

(Feel free to include answers and to these questions in a Supplementary Narrative, when doing so write see narrative on the space provided)

1. The legal description of the property: County -Wide

2. Parcel Number(s): County-wide Total Acreage: _____

3. Current Land Use Designation: N/A

4. Requested Land Use Designation: Update Chapter 7- Sub Section Energy - Renewable Energy Sources

5. Date of Concept Review: 5/23/2023 Concept Review Number: Z-PA-060-23

6. Why is this Comprehensive Plan Amendment being requested? (You must provide a summary of the anticipated development on this page, if not provided, the application cannot be processed.): _____

Update Chapter 7 Environmental Stewardship- Energy Element, Section Renewable Energy Sources to include other renewable energy sources besides Solar. Proposed multiple renewable energy sources besides Solar are Geothermal, Wind Energy, Bioenergy and Small hydro. Pinal County would like to propose a diverse renewable energy mix options for future energy demands that might arise.

7. Discuss any recent changes in the area that would support your application. _____

Multiple potential customers who have expressed interest in renewable sources other than Solar have been turned down from Pinal County as the Comprehensive plan does not address Geothermal, Wind, Bioenergy or Small Hydro projects.

8. Explain why the proposed amendment is needed and necessary at this time. _____

Pinal County is not equipped to currently process renewable energy applications besides Solar as the Comprehensive plan does not address other renewable sources.

INV#: _____ AMT: _____ DATE: _____ CASE: _____ Xref: _____

COMMUNITY DEVELOPMENT
Planning Division

PINAL COUNTY COMPREHENSIVE PLAN AMENDMENT APPLICATION

IN ADDITION TO THIS APPLICATION, YOU WILL NEED TO SUBMIT:

- A. **Certified Boundary Survey**, including legal descriptions of the proposed designations
- B. Location map which identifies the property and its relationship to Pinal County environs.
- C. Map showing the topography of the property.
- D. Site map which specifically identifies the property including parcels under separate ownership.
- E. Property owner(s) authorization for the Comprehensive Plan Amendment.
- F. Other information as may be determined necessary by the Planning staff or other information the applicant feels is pertinent to this request.
- G. Non-refundable filing fee as shown on the cover page.
- H. Narrative in PDF format.
- I. Neighborhood meeting report

Your application must be submitted digitally via the online submittal portal site at <https://citizenaccess.pinalcountyz.gov/CitizenAccess/Default.aspx>
Please call or email the Planning Division for more information.

I certify the information included in this application is accurate, to the best of my knowledge. I have read the application and I have included the information, as requested. I understand if the information submitted is incomplete, this application cannot be processed.

Pinal County		520 866 6642
Name of Landowner (Applicant)	Address	Phone Number

N/A		
Signature of Landowner (Applicant)		E-Mail Address

Brent Billingsley		520 866 6642
Name of Agent	Address	Phone Number

		brent.billingsley@pinal.gov
Signature of Agent		E-Mail Address

The Agent has the authority to act on behalf of the landowner. The Agent will be the contact person for Planning staff and must be present at all hearings. Please use the attached Agency Authorization form, if applicable

FINAL DOCUMENT

Chapter 7: Environmental Stewardship

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Energy

Introduction

Pinal County has a tremendous opportunity to be a leader in sustainability through prudent energy management. Using energy efficient materials and planning techniques is much easier and cost effective for new construction than trying to retrofit older structures. Pinal County has witnessed growth in traditional industries like agriculture and mining and has also seen strong growth in emerging manufacturing and technology sectors like aerospace and aviation, electric vehicles and batteries, renewable/green technologies and supply chains related to semiconductors and building materials.

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The planning and siting of infrastructure is much better done now than after development has occurred. For these reasons and others, it is the right time and place for a comprehensive energy approach to be created and implemented.

Purpose The Pinal County Energy element is an important component of the Plan. By developing a comprehensive energy strategy now, the County can be prepared to shape more sustainable growth.

Relationship to Pinal County's Vision several components of the Pinal County Vision are directly impacted by energy.

Environmental Stewardship How energy is generated and distributed in the County and the success level of conservation efforts will directly impact the regional environment. Air quality, water usage, and protection of sensitive areas and view sheds (siting facilities to minimize impact on key visual resources) will need to be addressed.

Economic Sustainability Without ample and reliable energy, Pinal County will not be competitive in attracting business and industry which will bring new jobs. In addition, energy costs have a direct impact on the cost of living and doing business.

Open Spaces and Places Generation and transmission facilities have to be located somewhere. There is a tendency of the public to not want facilities close to population centers. However, the County's open spaces are also cherished. How and where facilities are sited will need to be carefully planned.

Strategic Areas

The Energy element contains three strategic areas. The first two, Conservation and Renewable Energy Sources, satisfy the state of Arizona's Growing Smarter requirements that state an Energy element should include:

- A component that identifies policies that encourage and provide incentives for efficient use of energy.
- An assessment that identifies policies and practices that provide for greater uses of renewable energy sources.

The third strategic area addresses Energy Generation and Transmission. Conservation and the development of renewable energy sources will be effective in ensuring that the County's energy future moves toward sustainability but anticipated growth will certainly require an exponential growth in the generation and distribution of energy for the coming decades.

It should be noted that the Arizona Corporation Commission (ACC) is responsible for final decisions about facility siting. However, Pinal County needs to be active in providing input to ensure compatibility with the County's Vision and goals.

The focus of the Generation and Distribution Strategic Area of the Energy element is to:

- Illustrate the potential needs for generation and transmission infrastructure as the County grows.
- Inform residents and stakeholders of the present plans to locate future facilities throughout the County and the fact that everyone will need to share the burden of having safe, reliable, and clean energy throughout the County.
- Outline goals and policies to ensure that the County, municipal governments, and energy providers maintain a cooperative working relationship to facilitate appropriate locations for facilities while protecting Pinal County's physical environment and natural resources.

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Conservation

Pinal County will work with residents, other agencies, and the business community to expand energy conservation efforts. The County can have the most impact on conservation efforts through influencing construction methods and materials, site planning and community design, and education.

The importance of energy conservation cannot be overstated. It is not just the right thing to do, it has tremendous environmental, natural resource, and economic implications. To illustrate the sweeping impacts of the benefits of electrical energy conservation, the Coolidge Gas fired plant case study can be analyzed.

U.S. Energy Information Administration (EIA) projections for energy consumption shows an increase up to 15 % by the year 2050 in the Annual Energy Outlook (AEO 2023) (Figure 7.1). This projection in energy growth is result of the effects of economic growth, population growth, and increased travel offsetting continued energy efficiency improvements. In Arizona, the average household

electricity use yearly as recorded in April 2023 was 13,364 kWh. (1.52 kW). Pinal County as per U.S. Census recorded 145,554 households and consumed 221 megawatt in 2020. To put this in perspective, the Hoover Dam has a maximum capacity of 2,080 megawatts.

A natural gas fired plant, the Coolidge Generating Station with 575 megawatts capacity from 12 aero-derivative turbine units was completed in May 2011 by SRP. This power plant was proposed at a cost of \$500 million and completed on time and budget. Based on the 10,000 megawatt need projected in 2010, 18 new power plants of this type were proposed to generate the estimated additional electricity needs. However with a growing diversified energy portfolio and a mix of generation resources, the expansion of Coolidge Generating Station proposed 12 new generating units identical to the 12 existing units.

Conservation efforts have reduced the need for six of these plants and savings to ratepayers. In addition, the fuel and water saved in not operating those six facilities would have significant positive environmental and natural resource implications. Finally, less land would be required for generation and fewer transmission corridors could be a result. Additional conservation efforts would need to be encouraged to ensure sustainable growth for Pinal County.

As energy prices continue to rise, electricity, natural gas, and transportation costs take a larger piece of household and business budgets. The economic viability of energy efficient construction will increase due to this as will the need to find alternative transportation modes and a reduction in travel needs.

Renewable Energy Sources

Pinal County will review and consider proposals for the development and location of renewable sources to meet current

and future needs and to lessen the regions dependence on non-renewable energy sources. These might be stand alone facilities or co-located with other energy providers. Due to the intermittent nature of renewable energy sources, energy management for the grid operators can be a challenging task to balance between the supply and demand at all times.

Renewable Energy sources, such as biomass, geothermal resources, sunlight, water and wind are natural resources that can be converted into the following types of clean energy:

- Solar Energy
- Bioenergy
- Geothermal Energy
- Hydrogen
- Hydropower
- Wind Energy

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Source: <https://www.eia.gov/state>

The expansion of renewable energy opportunities shall be reviewed and considered by the County through its land use planning and permitting processes, at locations that do not disturb biologically sensitive areas and recommends guidelines to be followed issued by Arizona Game and Fish Department for all renewable projects. Pinal County intends to work with different jurisdictions/agencies and departments to identify locations suitable for such projects.

One of the most commonly used renewable energy source in Arizona is solar energy. The two main types of solar energy technologies are Photovoltaics (PV) and Concentrating Solar-thermal Power (CSP). With Federal and State grants, multiple solar farms have been approved by the County using the Photovoltaic technology. Historically, the economics of solar power have been

for smaller, individual property generation units and this solution should continue to be encouraged by the County.

Advances have now made it possible for entire households or buildings to significantly reduce their traditional energy dependence and at times may be able to generate enough power to make the meter run backwards. Unfortunately, the majority of homeowners and businesses do not have the financial resources to install such infrastructure. Federal and state grants have provided support but there is still a significant cost for installation. As energy costs continue to rise and technological advancements occur, renewable energy methodologies will become more feasible and attractive to individual property owners. Pinal County must be ready for this. Through its regulatory and taxation policies, the County can provide additional support.

There are major changes on the near horizon regarding large scale solar energy generation. There are two major reasons for this trend: technology has started to make large scale generation more financially feasible and government/regulatory agencies are requiring energy producers to diversify their energy portfolios and have set targets for renewable energy sources.

The solar power plant near Gila Bend that extends over three square miles of land area serves approximately 75,000 homes. The energy generated from it has been more costly than traditional sources and has been subsidized by ratepayers. Another challenge to large scale solar generation is space and location. The location for the renewable power sources must be consistent with other provisions existing in the Comprehensive plan (Pg. 341, Section 3, a, b, and e)

Solar energy technology doesn't end with electricity generation by PV or CSP systems. These solar energy systems must be integrated

into homes, businesses, and existing electrical grids with varying mixtures of traditional and other renewable energy sources.

Concentrating solar-thermal power (CSP) systems use mirrors to reflect and concentrate sunlight into receivers that collect solar energy and convert it to heat, which can then be used to produce electricity or stored for later use.

Pinal County residents have also expressed a strong desire for expanded post-secondary education and training opportunities. The emerging renewable energy market could provide the catalyst for college, university and technical training programs for the design, installation, and maintenance of renewable energy equipment and infrastructure.

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In addition to solar energy discussed above, the following are types of renewable energy Pinal County would assess through land-use planning concepts.

Bioenergy is a form of renewable energy that is derived from living organic materials known as biomass which can be used to produce transportation fuels, heat, electricity and other products. Biomass includes crop waste, urban construction material waste, food waste, forest thinning, purpose-grown grasses, woody energy crops and microalgae.

Geothermal energy is heat energy harnessed from the earth's interior. Geothermal resources are reservoirs of hot water and heat that exist or are human made at varying temperatures and depth below Earth's surface. Heat flow from earth is brought up to the surface in the form of hot ground water and steam. Geothermal heat pumps circulates water through pipes buried in the ground, or submerged in a water body, to heat and cool a building's HVAC system.

Hydrogen is another clean energy carrier produced from diverse domestic sources (natural gas, solar, wind, geothermal, biomass, fossil fuels, electricity) or produced from different processes (electrolysis, biological, water splitting, steam methane reforming) Hydrogen can be used in fuel cells to generate electricity or power and heat.

Hydropower or hydroelectric power is one of the oldest and largest sources of renewable energy that uses the natural flow of moving water to generate electricity. While most people associate the energy source with the Hoover Dam, a huge facility harnessing the power of an entire river, hydropower facilities come in all sizes. Technological advances and research have led some of the tiny facilities (micro turbines) to take advantage of water flows in municipal water facilities or irrigation ditches.

Wind Energy is a renewable source of energy that harnesses the power of wind through wind turbines collecting and converting the kinetic energy into electricity. Wind energy is actually a byproduct of the sun. The uneven heating of the atmosphere along with earth's irregular surfaces, and planets revolution around the sun combine to create wind.

Energy Generation and Transmission

Pinal County is served by several energy providers. Arizona Public Service, Salt River Project, Southwest Gas, and numerous Electrical and Irrigation and Drainage Districts all provide service in the County and several more entities have facilities such as the Western Area Power Authority, Tucson Electric Power, and the Southwest Transmission Cooperative.

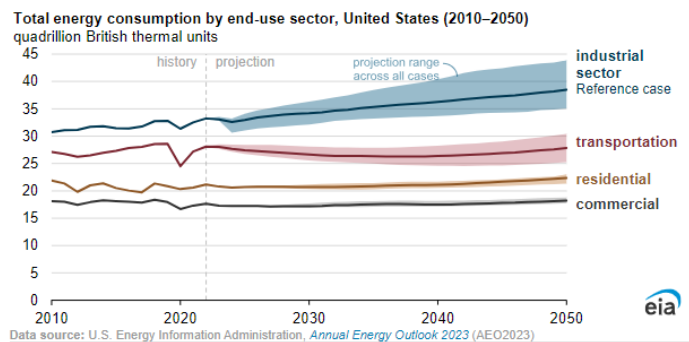
Pinal County will work with these energy providers to facilitate the provision of sufficient energy for residents and businesses and to encourage development of new facilities within the parameters of

the seven components of the Comprehensive Plan Vision for the Future.

Based on 2020 census data, the state population recorded was 7,151,502. The population increased for the State of Arizona from 2010 was 11.90 %, however Pinal County showed 13.20% increase with 425,264 population as recorded.

APRIL 3, 2023

U.S. energy consumption increases between 0% and 15% by 2050



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Figure 7.1 Source: US Energy Information Administration (EIA)

Year	Arizona Population	Pinal County Population
2020	7,151,502	425,264
2030	8,313,814	587,821
2040	9,206,879	778,909
2050	9,961,322	994,166
2060	10,662,273	1,230,545

Source: US Census Data and Arizona Commerce Authority

The above table is for illustrative purposes only as these are population projections that can change each year. Energy consumed for the year 2021 was 221 Megawatts. (Source EIA). Population projections indicate the increase in need for energy and with effective conservation and moving toward renewable sources, it is evident that additional traditional generation facilities will be needed. Citizens, governmental entities, and the energy providers will have to work closely together to ensure appropriate locations for new facilities. Significant planning has been done to project future electrical power needs for the region. The delivery of new energy sources to homes and businesses will also require the delivery system. Additional generation and transmission projects that have been identified in the past, ongoing and future studies will be subject to review and approval by the ACC. One such research on Micro Nuclear Systems or Small Modular Reactors (SMR's) with micro reactors, show promising insights for the energy sector due to the reasons of being small and modular while saving time in construction costs.

In summary, with Pinal County not being a direct service provider, its role in the energy future of the region will consist of providing education and information to the public, maintaining codes and policies to encourage conservation of energy, supporting the development of renewable sources, and coordinating with the energy industry to ensure appropriate development of adequate facilities.

Neither Pinal County's tax base nor legislative authority allow the County to play a large financial role in the energy future through incentives, tax credits, or other financing programs. However, the County can play a significant role in serving as the central point to assemble a diverse group of communities and regional stakeholders and partners to secure energy for future use.

The County can also be a leader in identifying new programs for funding sources to expand development of renewable energy sources.

Goals, Objectives and Policies

In order to make it easier for property owners to use the Goals, Objectives and Policies in the Plan and then incorporate them into their development proposals or amendments, the Policies have been placed into two separate categories. The two categories are:

- Public Responsibilities
- Private and Public Shared Responsibilities

Private development applicants should be aware of Public and Private Shared Responsibilities throughout the development process and should focus their Comprehensive Plan applications as specified in the implementation section of the Comprehensive Plan, or other relevant documents that set criteria for other applications.

Public Responsibilities are primarily incumbent on the County to implement through its policy development and planning.

Private and Public Shared Responsibilities, all entities, private and public, share the responsibilities of implementing these Policies.

Conservation

7.3 Goal: Improve the energy efficiency of Pinal County government.

7.3.1 Objective: Set an example by improving energy efficiency and use of renewable sources in County facilities, vehicle fleets, and equipment.

Policies:

7.3.1.1 Convert the vehicle fleet over time to alternative fuels.

7.3.1.2 Move toward compliance with green building benchmarks and programs for existing County buildings and facilities and require green building standards be developed in all new facility designs.

7.3.1.3 Locate solar energy generation equipment on County facilities which cost/benefit analyses proves advantageous.

7.3.1.4 Convert County facilities to low energy lighting and install energy efficient electrical equipment when economically feasible.

7.4 Goal: Improve the energy efficiency of structures in Pinal County.

7.4.1 Objective: Improve the energy efficiency of new construction and the existing building stock through building codes and processes.

Policies:

7.4.1.1 Maintain the most up to date International Building Codes (IBC) and International Energy Conservation Code (IECC) and provide training for staff to implement.

7.4.1.2 Encourage the expansion of energy efficient building practices.

7.4.1.3 Work with municipalities and Native American communities to standardize energy efficiency requirements and codes throughout the County.

7.4.1.4 Support refurbishing and remodeling projects to include energy efficiency components through expedited permitting and assistance.

7.4.1.5 Encourage all residential, commercial and industrial construction to meet “ENERGY STAR” as a minimum efficiency standard.

7.4.2 Objective: Reduce energy demand through community design.

Policies:

7.4.2.1 Encourage developments that use energy smart site design (e.g., solar orientation, cluster development).

7.4.2.2 Encourage Sonoran-friendly landscaping in developments to provide shade.

7.4.2.3 Implement the Activity Center philosophy to bring employment, commercial, and educational activities closer to residents and increase multimodal transportation options including transit, bicycle, and pedestrian modes.

7.5 Goal: Improve overall communication and collaboration regarding energy issues.

7.5.1 Objective: Provide energy conservation education and awareness in County communications.

Policies:

7.5.1.1 Provide energy conservation information on the County Web site with links to energy providers and conservation and consumer groups.

ENERGY STAR is a joint program of the EPA and the U.S. Department of Energy helping to save Americans money and protect the environment through energy efficient products and practices.

7.5.1.2 Work with energy providers to include energy conservation promotional materials to building owners at the issuance of Certificates of Occupancy.

7.5.2 Objective: Maintain cooperative working relationships.

Policies:

7.5.2.1 Hold periodic coordination meetings with energy providers to keep informed of the latest conservation programs offered.

7.5.2.2 The County should continue to participate in regional energy planning forums, such as the CATS Group, and work with the County's municipalities, Native American communities and energy providers to create a County-wide, long range energy strategy.

Renewable Sources

7.6 Goal: Expand small scale renewable energy in Pinal County.

7.6.1 Objective: Support small scale renewable energy projects

Policies:

7.6.1.1 Support statewide policy that provides property tax credits for renewable energy facilities on individual homes and businesses from net assessed valuation calculations.

7.6.1.2 Assess current codes so they are supportive in permitting small scale renewable energy projects. Explore ways to reduce barriers caused by homeowner's association restrictions.

7.6.1.3 Work with developers and energy providers to design neighborhoods with optimum solar orientation.

7.6.1.4 Support state and federal incentive programs for the development of renewable energy infrastructure for individuals and businesses.

7.6.1.5 Develop/amend ordinances to protect solar access through sensitive building orientation and for property owners, builders and developers wishing to install solar energy systems.

7.6.1.6 Support the transmission of renewable energy from sources within and outside of Pinal County.

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7.6.2 Objective: Support the growth of the renewable energy in Pinal County.

Policies:

7.6.2.1 Identify through specific area planning potential locations for renewable energy projects.

7.6.2.2 Support the attraction of renewable energy providers through the County's economic development strategy.

7.6.2.3 Work with economic development proponents to develop education and training programs for renewable energy employment opportunities.

Generation and Transmission

7.7 Goal: Support the provision of adequate energy for the future while protecting the natural environment and resources.

7.7.1 Objective: Identify and protect potential sites and corridors for new energy generation and transmission facilities.

Policies:

7.7.1.1 Work with energy providers through the specific area planning process to identify appropriate locations and buffering of future projects.

7.7.1.2 Work with energy providers to co-locate where possible facilities such as transmission lines, pipelines, substations, and terminals.

7.7.1.3 Encourage the adoption of designated generation and transmission and facility sites and corridors in future updates to County and municipal planning documents to protect against incompatible development and to maximize increased capacity.

7.7.2 Objective: Protect water and environmental resources.

Policies:

7.7.2.1 Monitor the evaluation process by other agencies of all proposals for new generating facilities to determine long-term impacts on water resources.

7.7.2.2 Support innovative designs for new generating facilities that minimize water use.

7.7.2.3 Explore innovative water re-use strategies.

7.7.2.4 Discourage facilities from locating in designated environmentally sensitive areas and encourage facilities to be in context with view sheds and waterways.

7.7.3 Objective: Provide information to citizens and the development community regarding future energy facilities.

Policies:

7.7.3.1 Keep up to date information about locations of existing and potential new generation and transmission facilities on the County Web site.

7.7.3.2 Review development proposals along with short and long range plans of energy providers to ensure an understanding of where facilities may be and to keep prospective residents and businesses informed.

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7.7.4 Objective: Maintain cooperative working relationships with energy providers.

Policies:

7.7.4.1 Hold a biannual “energy summit” bringing together providers, landowners and key county staff and leadership to discuss future plans and update one another on current planning and trends.

7.7.4.2 Work closely with energy providers during the evaluation of development plans to assess cumulative, County-wide impacts on energy availability and reliability.

7.7.4.3 Coordinate with energy providers in the implementation of the Growth Areas element to ensure energy infrastructure is adequate to support growth and infrastructure development.

7.7.4.4 Encourage involvement of energy providers in area planning processes.

7.7.4.5 Continue to participate in regional energy planning forums such as the CATS Group

Urban Heat Islands are built up areas that are hotter than nearby rural areas. Elevated heat island temperatures can cause environmental impacts. (EPA)

Urban Heat Island

7.8 Goal: Support strategies to reduce Urban Heat Islands and their environmental effects.

7.8.1 Objective: Identify key Urban Heat Island mitigation techniques and reduce Urban Heat Island effect through community planning and design

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Cool Pavements include a range of technologies aimed at reducing urban heat island effect.

Cool Roofs is a term that describes roofing materials with a high solar reflectance.

Green Roofs is a term describing a vegetative layer grown on a rooftop that can be installed on a wide range of buildings

7.8.1.1 Work with municipalities to avoid the development of heat islands through land use planning, open space preservation between developments, site design, and building materials and colors.

7.8.1.2 Encourage underground, understructure and/or multilevel parking structures

7.8.1.3 Encourage the use of “cool pavement” materials, “cool roofs” and “green roofs”

Appendix D: Glossary

The terms defined in this glossary are done so for purposes of the Pinal County Comprehensive Plan only and may not be relevant or accurate for use outside of this plan.

Acre foot (ac/ft) is equivalent to the volume of water required to cover 1 acre to a depth of 1 foot.

Agriculture includes areas where agri-business activities are permitted, including traditional farming and ranching operations.

Alluvial plain is fairly flat, gently sloping landform found at the base of mountain ranges. The geography requires careful planning so that drainage patterns are preserved.

Airport Reserve surrounds existing airports to allow for adequate buffering of surrounding land uses, buffering of surrounding land uses, expansion of airport operations and facilities and employment uses compatible with the airport.

Aviation-Based Commerce Center is a facility served by passenger service and air freight providers; it should be buffered from incompatible uses and may have surrounding employment-related uses that take advantage of aviation services and allow for expansion of airport operations and facilities.

Bajadas are shallow slopes that lie at the base of rocky hills, where materials accumulate from the weathering of the rocks. They typically have a mixture of boulders, stones, gravel, sand and silt particles, creating a deep and complex soil structure that retains water and supports a rich vegetation.

Basic activities bring new dollars into the community.

Bioenergy is the form of renewable energy derived from living organic materials known as biomass.

Biomass is a renewable energy resource derived from plant and algae based materials that include wood and wood processing waste (firewood, wood pellets, chips, lumber, black liquor from pulp and paper mills, furniture mill sawdust), agricultural crops and waste (corn, soybeans, sugarcane, switch grass, woody plants, crop residues), biogenic materials in municipal solid waste (cotton and wool products, paper products, food, yard and wood wastes), animal manure and human sewage for producing biogas.

Biome is a major regional or global biotic community, such as a grassland or desert, characterized chiefly by the dominant forms of plant life and the prevailing climate.

Buildout is defined as the ultimate development of land in Pinal County with appropriate land uses based on a series of assumptions, including land ownership patterns, topographic and environmental constraints and opportunities, development potential, infrastructure support, and private property rights.

The **Certified Local Government Program** is a preservation partnership between local, state and national governments focused on promoting historic preservation at the grass roots level.

Community Commercial is intended to be mid-scale (approximately 20 to 40 acres) of retail, service, and professional office.

Compendium is a concise, yet comprehensive, compilation of a body of knowledge.

Concentrating Solar-Thermal Power (CSP) systems use mirrors to reflect and concentrate sunlight onto receivers that collect solar energy and convert it to heat, which can be used to produce electricity or stored for later use.

Context Sensitive is defined as an approach by which development fits its physical setting and preserves scenic, aesthetic, historic and environmental resources.

Density is the number of housing units per acre developed or allowed to develop.

Density Bonus or Incentive is allowing higher density residential as a trade-off for including in a project a desired need such as open space or affordable housing unit.

Desert Habitats: Desert Habitats such as the Sonoran desert scrub habitats are low-elevation areas that receive less than 10 in (25 cm) of rain each year, mostly in bi-modal pattern (occurring in winter and summer). In these arid habitats, vegetation is generally sparse and represented by cacti and other succulents as well as other vegetative species including mesquite, ironwood, and palo verde, among others.

Design charrette is a workshop in which participants work together, collaborating or building off of others work, and present their findings in a public forum.

Eco-tourism is about creating and satisfying a hunger for nature, about exploiting tourism's potential for conservation and development, and about averting its negative impact on ecology, culture and aesthetics.

Employment is defined as areas that can support a variety of employment-generating business activities such as industrial, office, business park, and warehousing and distribution.

Endangered species are those in immediate danger of becoming extinct and in need of protection in order to survive.

ENERGY STAR is a joint program of the EPA and the U.S. Department of Energy helping to save Americans money and protect the environment through energy efficient products and practices.

Floor Area Ratio (FAR) is a formula for determining volume of building as a multiple of the lot area.

General Commercial provides locations for commercial development included in adopted municipal general plans. The Pinal County Comprehensive Plan does not make any changes to these locations. This category allows uses in unincorporated areas.

General Public Facilities/Services includes large public facilities that require significant space such as landfills, wastewater facilities, water campuses, and concentrations of public buildings.

Goals represent the desired outcomes or results that the County hopes to realize over time. Goals will align with Pinal County's Vision.

Geothermal Energy is heat energy from the earth – Geo (earth) + thermal (heat)

High Intensity Activity Centers are approximately 1,000 or more acres with a mix of professional office, business parks, and industrial often in a campus-like setting, as well as high and medium density residential.

Hohokam is a term derived from an O'odham word "Huhugam" that is often used to reference people and things that have gone before.

Horizontal Mixed Use combines residential, commercial and employment-type uses on the same site, but in separate buildings.

Hydrogen is a clean and flexible energy carrier. It can deliver and store energy.

Hydropower is a source of renewable energy that uses the natural flow of moving water to generate electricity.

Indian Community indicates a sovereign nation, operating under its own tribal government laws.

Landscape: Landscape is an area of land composed of an interacting variety of ecosystems with a diversity of physical elements. The configuration of a landscape is defined by the physical character, arrangement, and context of its elements. Combining both their physical origins and the cultural overlay of human presence, often created over millennia, landscapes reflect a living mixture of people and place that is vital to local and national identity.

Land use transition is defined as a gradual change in land use intensities to ensure compatibility.

Low Intensity Activity Centers are approximately 100 acres with a mix of professional office, commercial, tourism and hospitality uses, as well as medium to high density residential.

Major Open Space indicates lands preserved for recreational purposes or lands protected for cultural or ecological reasons.

Micro reactors are a subset of Small Modular Reactor that generate electric power typically up to 10MW (e)

Mid Intensity Activity Centers are approximately 500 acres with a mix of clustered professional office, commercial, tourism and hospitality uses, medical, and medium to high density residential.

Military represents the Florence Military Reservation, Silver Bell Army Heliport (SBAH) and other ancillary facilities.

Mining/Extraction identifies those areas where mineral resources have been identified or are likely to be identified in the future. The intent of this designation is to protect the mineral resources by minimizing conflicts with surrounding land uses. This designation recognizes the rights of exploration, mining, and processing of mineral resources. Copper mining is currently occurring around Superior and Kearny. All mining operations conducted by whatever techniques and technologies employed are required to comply with all applicable federal, state, and local laws providing for the protection of environmental resources.

Municipal Planning Areas (MPAs) are defined as the geographic areas around an incorporated city or town that is influenced by the city's land use pattern and may be incorporated into the jurisdiction at some point in the future.

Natural Resources: The naturally occurring assets that provide use benefits through the provision of raw materials and energy used in economic activity (or that may provide such benefits one day) and that are subject primarily to quantitative depletion through human use. They are subdivided into four categories: mineral and energy resources, soil resources, water resources, and biological resources.

Neighborhood Commercial is defined as less than 20 acres and is not shown on the Land Use Plan, but may be included in all land use designations if it addresses the Comprehensive Plan planning guidelines. Neighborhood commercial includes commercial goods and services and typically serves a surrounding residential population.

Noise Sensitive areas include properties that are adjacent to or within the flight path of airports, including Casa Grande, Eloy, Superior, San Manuel, and Coolidge Airports, Pinal Air Park, and Phoenix-Mesa Gateway Airport. The area is subject to high noise levels resulting from aircraft arrival and departures. The intent is to encourage land use compatibility with airport activities. The Noise Sensitive Area designation is an overlay designation with additional stipulations to the underlying designations.

Non-basic activities, in most cases, circulate existing dollars within the community.

Objectives are broad statements of intent to implement the goals and provide framework for the policies.

Photovoltaic (PV) is a cell that is used to convert sunlight into electrical energy. A single cell is small, typically producing about 1 or 2 watts of power.

Policies address how the goals will be achieved. Policies should be read as if it is preceded by the words “It is the County’s general policy to...” Some policies may appear to conflict with one another.

Primary Airport are those airports that have 10 or more based aircraft and have 2,000 or more annual aircraft operations. These airports offer future economic development opportunities as they grow and expand.

Private and Public Shared Responsibilities, all entities, private and public, share the responsibilities of implementing these Policies.

Public Responsibilities are primarily incumbent on the County to implement through its policy development and planning.

Recreation/Conservation identifies areas under an extra layer of federal protection, meaning that any infrastructure planned to traverse these lands will have to go through a federal permitting process and environmental review.

Regional Commercial is intended to be large-scale (over 40 acre) retail centers that draw from a large regional market area. These centers might include malls, power centers, big box retail centers, and auto dealerships.

Renewable Energy is energy produced from natural sources that are replenished naturally and do not run out.

Riparian areas: Riparian areas are the natural areas around rivers, washes, and other bodies of water. These areas include channel itself as well as the vegetation that acts as a transition zone between the riparian and upland area.

Scenic vista is a view of an area that is visually or aesthetically pleasing.

Secondary Airport is an airport that does not qualify as a Primary Airport. These airports offer future economic development opportunities as they grow and expand.

Small Modular Reactors (SMR’s) advanced nuclear reactors that have a power capacity of up to 300 MW (e) per unit. These are 1/3rd of generating capacity of traditional nuclear power reactors and are physically a fraction of the size of the conventional nuclear power reactor.

Solar Energy is the energy produced by harnessing the solar radiation or the sun rays.

State Shared Revenues is a portion of revenues Arizona shares with local governments.

Threatened species are defined as those likely to become endangered if not protected.

Time Tax is the price paid sitting in long commutes that cuts into what we value most – our time with family, friends, home, and community.

Transit-Oriented Development is pedestrian-oriented development designed to facilitate access and use of transit facilities including buses, bus stops and light rail stations.

Vertical Mixed Use is typified by residential use over commercial uses in the same building or any other potential diversity of land uses within a building.

Viewshed is the entire area an individual can see from a given point.

Wildlife Corridors: Wildlife corridors are pathways or habitats with no or few barriers to wildlife species. These landscape linkages allow for the safe passage of daily, seasonal, or annual wildlife movements. Wildlife corridors often occur in riparian areas, canyons, ridgelines, and other landscape features that constrain wildlife movements into more restricted paths.

Wind Energy is a renewable energy source that harnesses the power of wind through wind turbines.

Wind Turbine is a device that converts kinetic energy of wind into electrical energy.

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SHOWN AS STRIKE-OFF

Chapter 7: Environmental Stewardship

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Energy

Introduction

Pinal County has a tremendous opportunity to be a leader in sustainability through prudent energy management. ~~Unlike many areas of the country where the majority of the built environment is decades old, by 2020, a vast majority of Pinal County's built environment will have been constructed after the Millennium.~~ Using energy efficient materials and planning techniques is much easier and cost effective for new construction than trying to retrofit older structures.

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The planning and siting of infrastructure is much better done now than after development has occurred. For these reasons and others, it is the right time and place for a comprehensive energy approach to be created and implemented.

Purpose The Pinal County Energy element is an important component of the Plan. By developing a comprehensive energy strategy now, the County can be prepared to shape more sustainable growth.

Relationship to Pinal County's Vision Several components of the Pinal County Vision are directly impacted by energy.

Environmental Stewardship How energy is generated and distributed in the County and the success level of conservation efforts will directly impact the regional environment. Air quality, water usage, and protection of sensitive areas and viewsheds (siting facilities to minimize impact on key visual resources) will need to be addressed.

Economic Sustainability Without ample and reliable energy, Pinal County will not be competitive in attracting business and industry which will bring new jobs. In addition, energy costs have a direct impact on the cost of living and doing business.

Open Spaces and Places Generation and transmission facilities have to be located somewhere. There is a tendency of the public to not want facilities close to population centers. However, the County's open spaces are also cherished. How and where facilities are sited will need to be carefully planned.

Strategic Areas

The Energy element contains three strategic areas. The first two, Conservation and Renewable Energy Sources, satisfy the state of Arizona's Growing Smarter requirements that state an Energy element should include:

- A component that identifies policies that encourage and provide incentives for efficient use of energy.
- An assessment that identifies policies and practices that provide for greater uses of renewable energy sources.

The third strategic area addresses Energy Generation and Transmission. Conservation and the development of renewable energy sources will be effective in ensuring that the County's energy future moves toward sustainability but anticipated growth will certainly require an exponential growth in the generation and distribution of energy for the coming decades.

It should be noted that the Arizona Corporation Commission (ACC) is responsible for final decisions about facility siting. However, Pinal

County needs to be active in providing input to ensure compatibility with the County's Vision and goals.

The focus of the Generation and Distribution Strategic Area of the Energy element is to:

- Illustrate the potential needs for generation and transmission infrastructure as the County grows.
- Inform residents and stakeholders of the present plans to locate future facilities throughout the County and the fact that everyone will need to share the burden of having safe, reliable, and clean energy throughout the County.
- Outline goals and policies to ensure that the County, municipal governments, and energy providers maintain a cooperative working relationship to facilitate appropriate locations for facilities while protecting Pinal County's physical environment and natural resources.

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Conservation

Pinal County will work with residents, other agencies, and the business community to expand energy conservation efforts. The County can have the most impact on conservation efforts through influencing construction methods and materials, site planning and community design, and education.

The importance of energy conservation cannot be overstated. It is not just the right thing to do, it has tremendous environmental, natural resource, and economic implications. To illustrate the sweeping impacts of the benefits of electrical energy conservation, an actual case study can be analyzed.

~~The recently completed *Central Arizona Transmission System 2016 Transmission Study* estimates a need for 10,000 more megawatts of~~

~~power to serve Pinal County.~~ To put this in perspective, the Hoover Dam has a maximum capacity of 2,080 megawatts.

A natural gas fired plant that will generate 575 megawatts of electricity is proposed in Coolidge at a cost of \$500 million. Based on the 10,000 megawatt need, 18 new power plants of this type would be needed to generate the estimated additional electricity needs. A decrease in demand through conservation efforts of 11 percent would eliminate the need for two of these plants at a savings of \$1 billion to ratepayers. In addition, the fuel and water saved in not operating those two facilities would have significant positive environmental and natural resource implications. Finally, less land would be required for generation and fewer transmission corridors could be a result. A conservation level of 11% is an attainable goal.

As energy prices continue to rise, electricity, natural gas, and transportation costs take a larger piece of household and business budgets. The economic viability of energy efficient construction will increase due to this as will the need to find alternative transportation modes and a reduction in travel needs.

Renewable Energy Sources

Pinal County will ~~provide support~~ for the development and location of renewable sources to meet current and future needs and to lessen the regions dependence on non-renewable energy sources. These might be stand alone facilities or co-located with other energy providers.

The expansion of renewable energy opportunities ~~should be supported~~ by the County through its land use planning and permitting processes. One ~~very exciting viable~~ renewable energy source in Arizona is solar. ~~Historically, the economics of solar power~~

~~have been for smaller, individual property generation units and this solution should continue to be encouraged by the County.~~

Advances have now made it possible for entire households or buildings to significantly reduce their traditional energy dependence and at times may be able to generate enough power to make the meter run backwards. Unfortunately, the majority of homeowners and businesses do not have the financial resources to install such infrastructure. Federal and state grants have provided support but there is still a significant cost for installation. As energy costs continue to rise and technological advancements occur, ~~this option~~ will become more feasible and attractive to individual property owners. Pinal County must be ready for this. Through its regulatory and taxation policies, the County can provide additional support.

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There are major changes on the near horizon regarding large scale solar energy generation. There are two major reasons for this trend: technology has started to make large scale generation more financially feasible and government/regulatory agencies are requiring energy producers to diversify their energy portfolios and have set targets for renewable energy sources.

~~A planned solar power plant near Gila Bend will serve approximately 75,000 homes upon completion. While this plant will be a breakthrough for Arizona, the energy generated from it will be much more costly than current sources and will be subsidized by ratepayers. However, as non-renewable energy sources continue to become more expensive and technology improves, the gap between traditional and solar power should begin to close. Another challenge to large scale solar generation is space. The planned Gila Bend facility will require up to three square miles of land for its solar fields and power plant.~~

Pinal County residents have also expressed a strong desire for expanded post-secondary education and training opportunities. The emerging renewable energy market could provide the catalyst for college, university and technical training programs for the design, installation, and maintenance of renewable energy equipment and infrastructure.

Energy Generation and Transmission

Pinal County is served by several energy providers. Arizona Public Service, Salt River Project, Southwest Gas, and numerous Electrical and Irrigation and Drainage Districts all provide service in the County and several more entities have facilities such as the Western Area Power Authority, Tucson Electric Power, and the Southwest Transmission Cooperative.

Pinal County will work with these energy providers to facilitate the provision of sufficient energy for residents and businesses and to encourage development of new facilities within the parameters of the seven components of the Comprehensive Plan Vision for the Future.

~~According to the CATS HV 2016 Transmission Study, in 2016, annual electric power generation in Arizona is projected to be 30,997 megawatts and electricity used 24,819 megawatts. This means that overall, Arizona is anticipated to be a net energy exporter. However, this will not be the case throughout the year. During the summer months, Arizona providers must purchase additional power from other states to meet higher demands.~~

~~Based on the 2006 state population of 6.3 million and using a straight line projection, each 100,000 people in Arizona will require 394 megawatts of power. The following table (7-1) estimates the electrical energy needs of Pinal County at various~~

~~population levels. This information is for illustrative purposes only as these needs change significantly by season.~~

7-1: Pinal County Electricity Need

Population Growth	Additional Electricity Required
100,000	394 megawatts
500,000	1,970 megawatts
1,000,000	3,940 megawatts
2,000,000	7,880 megawatts
3,000,000	11,820 megawatts

Source: CATS HV 2016 Transmission Study

Even with effective conservation and moving toward renewable sources, it is evident that additional traditional generation facilities will be needed (see table 7-1). ~~In fact, several new generating facilities have recently been identified for development on the short term horizon.~~ Citizens, governmental entities, and the energy providers will have to work closely together to ensure appropriate locations for new facilities.

Significant planning has been done to project future electrical power needs for the region. The delivery of new energy sources to homes and businesses will also require the delivery system. Additional generation and transmission project that have been identified in past, ongoing and future studies will be subject to review and approval by the ACC.

In summary, with Pinal County not being a direct service provider, its role in the energy future of the region will consist of providing education and information to the public, maintaining codes and policies to encourage conservation of energy, supporting the development of renewable sources, and coordinating with the

energy industry to ensure appropriate development of adequate facilities.

Neither Pinal County's tax base nor legislative authority allow the County to play a large financial role in the energy future through incentives, tax credits, or other financing programs. However, the County can play a significant role in serving as the central point to assemble a diverse group of communities and regional stakeholders and partners to secure energy for future use.

The County can also be a leader in identifying new programs for funding sources to expand development of renewable energy sources.

Goals, Objectives and Policies

In order to make it easier for property owners to use the Goals, Objectives and Policies in the Plan and then incorporate them into their development proposals or amendments, the Policies have been placed into two separate categories. The two categories are:

- Public Responsibilities
- Private and Public Shared Responsibilities

Private development applicants should be aware of Public and Private Shared Responsibilities throughout the development process and should focus their Comprehensive Plan applications as specified in the implementation section of the Comprehensive Plan, or other relevant documents that set criteria for other applications.

Public Responsibilities are primarily incumbent on the County to implement through its policy development and planning.

Private and Public Shared Responsibilities, all entities, private and public, share the responsibilities of implementing these Policies.

Conservation

7.3 Goal: Improve the energy efficiency of Pinal County government.

7.3.1 Objective: Set an example by improving energy efficiency and use of renewable sources in County facilities, vehicle fleets, and equipment.

Policies:

7.3.1.1 Convert the vehicle fleet over time to alternative fuels.

7.3.1.2 Move toward compliance with green building benchmarks and programs for existing County buildings and facilities and require green building standards be developed in all new facility designs.

7.3.1.3 Locate solar energy generation equipment on County facilities which cost/benefit analyses proves advantageous.

7.3.1.4 Convert County facilities to low energy lighting and install energy efficient electrical equipment when economically feasible.

7.4 Goal: Improve the energy efficiency of structures in Pinal County.

7.4.1 Objective: Improve the energy efficiency of new construction and the existing building stock through building codes and processes.

Public Responsibilities, those that are primarily incumbent on the County to implement through its policy development and planning, appear *italicized*.

Private and Public Shared Responsibilities, all entities, private and public, share the responsibility of implementing these Policies and these policies appear in **plain text**.

ENERGY STAR is a joint program of the EPA and the U.S. Department of Energy helping to save Americans money and protect the environment through energy efficient products and practices.

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Policies:

7.4.1.1 *Maintain the most up to date International Building Codes (IBC) and International Energy Conservation Code (IECC) and provide training for staff to implement.*

7.4.1.2 Encourage the expansion of energy efficient building practices.

7.4.1.3 *Work with municipalities and Native American communities to standardize energy efficiency requirements and codes throughout the County.*

7.4.1.4 *Support refurbishing and remodeling projects to include energy efficiency components through expedited permitting and assistance.*

7.4.1.5 Encourage all residential, commercial and industrial construction to meet “ENERGY STAR” as a minimum efficiency standard.

7.4.2 Objective: Reduce energy demand through community design.

Policies:

7.4.2.1 Encourage developments that use energy smart site design (e.g., solar orientation, cluster development).

7.4.2.2 Encourage Sonoran-friendly landscaping in developments to provide shade.

7.4.2.3 *Implement the Activity Center philosophy to bring employment, commercial, and educational activities closer to residents and increase multimodal transportation options including transit, bicycle, and pedestrian modes.*

7.5 Goal: Improve overall communication and collaboration regarding energy issues.

7.5.1 Objective: Provide energy conservation education and awareness in County communications.

Policies:

7.5.1.1 Provide energy conservation information on the County Web site with links to energy providers and conservation and consumer groups.

7.5.1.2 Work with energy providers to include energy conservation promotional materials to building owners at the issuance of Certificates of Occupancy.

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7.5.2 Objective: Maintain cooperative working relationships.

Policies:

7.5.2.1 Hold periodic coordination meetings with energy providers to keep informed of the latest conservation programs offered.

7.5.2.2 The County should continue to participate in regional energy planning forums, such as the CATS Group, and work with the County's municipalities, Native American communities and energy providers to create a County-wide, long range energy strategy.

Renewable Sources

7.6 Goal: Expand renewable energy in Pinal County.

7.6.1 Objective: Support small scale renewable energy projects

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Policies:

7.6.1.1 Support statewide policy that provides property tax credits for renewable energy facilities on individual homes and businesses from net assessed valuation calculations.

7.6.1.2 Assess current codes so they are supportive in permitting small scale renewable energy projects. Explore ways to reduce barriers caused by homeowner’s association restrictions.

7.6.1.3 Work with developers and energy providers to design neighborhoods with optimum solar orientation.

7.6.1.4 Support state and federal incentive programs for the development of renewable energy infrastructure for individuals and businesses.

7.6.1.5 Develop/amend ordinances to protect solar access through sensitive building orientation and for property owners, builders and developers wishing to install solar energy systems.

7.6.1.6 Support the transmission of renewable energy from sources within and outside of Pinal County.

7.6.2 Objective: Support the growth of the renewable energy in Pinal County.

Policies:

7.6.2.1 Identify through specific area planning potential locations for renewable energy projects.

7.6.2.2 Support the attraction of renewable energy providers through the County’s economic development strategy.

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7.6.2.3 *Work with economic development proponents to develop education and training programs for renewable energy employment opportunities.*

Generation and Transmission

7.7 Goal: Support the provision of adequate energy for the future while protecting the natural environment and resources.

7.7.1 Objective: Identify and protect potential sites and corridors for new energy generation and transmission facilities.

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Policies:

7.7.1.1 *Work with energy providers through the specific area planning process to identify appropriate locations and buffering of future projects.*

7.7.1.2 *Work with energy providers to co-locate where possible facilities such as transmission lines, pipelines, substations, and terminals.*

7.7.1.3 *Encourage the adoption of designated generation and transmission and facility sites and corridors in future updates to County and municipal planning documents to protect against incompatible development and to maximize increased capacity.*

7.7.2 Objective: Protect water and environmental resources.

Policies:

7.7.2.1 Monitor the evaluation process by other agencies of all proposals for new generating facilities to determine long-term impacts on water resources.

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Urban Heat Island

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7.8.1 Objective: Identify key Urban Heat Island mitigation techniques and reduce Urban Heat Island effect through community planning and design

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Acre foot (ac/ft) is equivalent to the volume of water required to cover 1 acre to a depth of 1 foot.

Agriculture includes areas where agri-business activities are permitted, including traditional farming and ranching operations.

Alluvial plain is fairly flat, gently sloping landform found at the base of mountain ranges. The geography requires careful planning so that drainage patterns are preserved.

Airport Reserve surrounds existing airports to allow for adequate buffering of surrounding land uses, buffering of surrounding land uses, expansion of airport operations and facilities and employment uses compatible with the airport.

Aviation-Based Commerce Center is a facility served by passenger service and air freight providers; it should be buffered from incompatible uses and may have surrounding employment-related uses that take advantage of aviation services and allow for expansion of airport operations and facilities.

Bajadas are shallow slopes that lie at the base of rocky hills, where materials accumulate from the weathering of the rocks. They typically have a mixture of boulders, stones, gravel, sand and silt particles, creating a deep and complex soil structure that retains water and supports a rich vegetation.

Basic activities bring new dollars into the community.

Biome is a major regional or global biotic community, such as a grassland or desert, characterized chiefly by the dominant forms of plant life and the prevailing climate.

Buildout is defined as the ultimate development of land in Pinal County with appropriate land uses based on a series of assumptions, including land ownership patterns, topographic and environmental constraints and opportunities, development potential, infrastructure support, and private property rights.

The **Certified Local Government Program** is a preservation partnership between local, state and national governments focused on promoting historic preservation at the grass roots level.

Community Commercial is intended to be mid-scale (approximately 20 to 40 acres) of retail, service, and professional office.

Compendium is a concise, yet comprehensive, compilation of a body of knowledge.

Context Sensitive is defined as an approach by which development fits its physical setting and preserves scenic, aesthetic, historic and environmental resources.

Density is the number of housing units per acre developed or allowed to develop.

Density Bonus or Incentive is allowing higher density residential as a trade-off for including in a project a desired need such as open space or affordable housing unit.

Desert Habitats: Desert Habitats such as the Sonoran desert scrub habitats are low-elevation areas that receive less than 10 in (25 cm) of rain each year, mostly in bi-modal pattern (occurring in winter and summer). In these arid habitats, vegetation is generally sparse and represented by cacti and other succulents as well as other vegetative species including mesquite, ironwood, and palo verde, among others.

Design charrette is a workshop in which participants work together, collaborating or building off of others work, and present their findings in a public forum.

Eco-tourism is about creating and satisfying a hunger for nature, about exploiting tourism's potential for conservation and development, and about averting its negative impact on ecology, culture and aesthetics.

Employment is defined as areas that can support a variety of employment-generating business activities such as industrial, office, business park, and warehousing and distribution.

Endangered species are those in immediate danger of becoming extinct and in need of protection in order to survive.

ENERGY STAR is a joint program of the EPA and the U.S. Department of Energy helping to save Americans money and protect the environment through energy efficient products and practices.

Floor Area Ratio (FAR) is a formula for determining volume of building as a multiple of the lot area.

General Commercial provides locations for commercial development included in adopted municipal general plans. The Pinal County Comprehensive Plan does not make any changes to these locations. This category allows uses in unincorporated areas.

General Public Facilities/Services includes large public facilities that require significant space such as landfills, wastewater facilities, water campuses, and concentrations of public buildings.

Goals represent the desired outcomes or results that the County hopes to realize over time. Goals will align with Pinal County's Vision.

High Intensity Activity Centers are approximately 1,000 or more acres with a mix of professional office, business parks, and industrial often in a campus-like setting, as well as high and medium density residential.

Hohokam is a term derived from an O’odham word “Huhugam” that is often used to reference people and things that have gone before.

Horizontal Mixed Use combines residential, commercial and employment-type uses on the same site, but in separate buildings.

Indian Community indicates a sovereign nation, operating under its own tribal government laws.

Landscape: Landscape is an area of land composed of an interacting variety of ecosystems with a diversity of physical elements. The configuration of a landscape is defined by the physical character, arrangement, and context of its elements. Combining both their physical origins and the cultural overlay of human presence, often created over millennia, landscapes reflect a living mixture of people and place that is vital to local and national identity.

Land use transition is defined as a gradual change in land use intensities to ensure compatibility.

Low Intensity Activity Centers are approximately 100 acres with a mix of professional office, commercial, tourism and hospitality uses, as well as medium to high density residential.

Major Open Space indicates lands preserved for recreational purposes or lands protected for cultural or ecological reasons.

Mid Intensity Activity Centers are approximately 500 acres with a mix of clustered professional office, commercial, tourism and hospitality uses, medical, and medium to high density residential.

Military represents the Florence Military Reservation, Silver Bell Army Heliport (SBAH) and other ancillary facilities.

Mining/Extraction identifies those areas where mineral resources have been identified or are likely to be identified in the future. The intent of this designation is to protect the mineral resources by minimizing conflicts with surrounding land uses. This designation recognizes the rights of exploration, mining, and processing of mineral resources. Copper mining is currently occurring around Superior and Kearny. All mining operations conducted by whatever techniques and technologies employed are required to comply with all applicable federal, state, and local laws providing for the protection of environmental resources.

Municipal Planning Areas (MPAs) are defined as the geographic areas around an incorporated city or town that is influenced by the city’s land use pattern and may be incorporated into the jurisdiction at some point in the future.

Natural Resources: The naturally occurring assets that provide use benefits through the provision of raw materials and energy used in economic activity (or that may provide such benefits one day) and that are subject primarily to quantitative depletion through human use. They are subdivided into four categories: mineral and energy resources, soil resources, water resources, and biological resources.

Neighborhood Commercial is defined as less than 20 acres and is not shown on the Land Use Plan, but may be included in all land use designations if it addresses the Comprehensive Plan planning guidelines. Neighborhood commercial includes commercial goods and services and typically serves a surrounding residential population.

Noise Sensitive areas include properties that are adjacent to or within the flight path of airports, including Casa Grande, Eloy, Superior, San Manuel, and Coolidge Airports, Pinal Air Park, and Phoenix-Mesa Gateway Airport. The area is subject to high noise levels resulting from aircraft arrival and departures. The intent is to encourage land use compatibility with airport activities. The Noise Sensitive Area designation is an overlay designation with additional stipulations to the underlying designations.

Non-basic activities, in most cases, circulate existing dollars within the community.

Objectives are broad statements of intent to implement the goals and provide framework for the policies.

Policies address how the goals will be achieved. Policies should be read as if it is preceded by the words “It is the County’s general policy to...” Some policies may appear to conflict with one another.

Primary Airport are those airports that have 10 or more based aircraft and have 2,000 or more annual aircraft operations. These airports offer future economic development opportunities as they grow and expand.

Private and Public Shared Responsibilities, all entities, private and public, share the responsibilities of implementing these Policies.

Public Responsibilities are primarily incumbent on the County to implement through its policy development and planning.

Recreation/Conservation identifies areas under an extra layer of federal protection, meaning that any infrastructure planned to traverse these lands will have to go through a federal permitting process and environmental review.

Regional Commercial is intended to be large-scale (over 40 acre) retail centers that draw from a large regional market area. These centers might include malls, power centers, big box retail centers, and auto dealerships.

Riparian areas: Riparian areas are the natural areas around rivers, washes, and other bodies of water. These areas include channel itself as well as the vegetation that acts as a transition zone between the riparian and upland area.

Scenic vista is a view of an area that is visually or aesthetically pleasing.

Secondary Airport is an airport that does not qualify as a Primary Airport. These airports offer future economic development opportunities as they grow and expand.

State Shared Revenues is a portion of revenues Arizona shares with local governments.

Threatened species are defined as those likely to become endangered if not protected.

Time Tax is the price paid sitting in long commutes that cuts into what we value most – our time with family, friends, home, and community.

Transit-Oriented Development is pedestrian-oriented development designed to facilitate access and use of transit facilities including buses, bus stops and light rail stations.

Vertical Mixed Use is typified by residential use over commercial uses in the same building or any other potential diversity of land uses within a building.

Viewshed is the entire area an individual can see from a given point.

Wildlife Corridors: Wildlife corridors are pathways or habitats with no or few barriers to wildlife species. These landscape linkages allow for the safe passage of daily, seasonal, or annual wildlife movements. Wildlife corridors often occur in riparian areas, canyons, ridgelines, and other landscape features that constrain wildlife movements into more restricted paths.

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Renewable Energy is energy produced from natural sources that are replenished naturally and do not run out.

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Small Modular Reactors (SMR’s) advanced nuclear reactors that have a power capacity of up to 300 MW (e) per unit. These are 1/3rd of generating capacity of traditional nuclear power reactors and are physically a fraction of the size of the conventional nuclear power reactor.

Solar Energy is the energy produced by harnessing the solar radiation or the sun rays.

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Wind Energy is a renewable energy source that harnesses the power of wind through wind turbines.

Wind Turbine is a device that converts kinetic energy of wind into electrical energy.



2023 Major Comprehensive Plan Amendment NEIGHBORHOOD MEETING FOR

PINAL COUNTY INITIATED ITEM:

PZ-PA-006-23 – Ch-7 Environmental Stewardship (Text Amendment)

Pinal County Community Development- Planning Division would be hosting a neighborhood meeting to provide information and receive input for the above mentioned four county initiated Major Comprehensive Plan Amendments for 2023. Planning Division would be available to address concerns and questions.

Date: September 28th 2023

**Location: Ocotillo Room, Community Development Services Building
85 N Florence Street, Florence, Arizona**

Time: 5:30pm-8:00pm

Please feel free to give us a call @ 520-866-6641 or send an email to Sangeeta.deokar@pinalcountyz.gov if you would like to join us for this event.

We welcome your input and look forward to seeing you there.

Thank you!

NOTICE OF PUBLIC HEARING BY THE PINAL COUNTY PLANNING AND ZONING COMMISSION AT 9:00 A.M. ON THE **19th** DAY OF **OCTOBER, 2023**, IN THE PINAL COUNTY ADMINISTRATIVE COMPLEX BUILDING A, ADMINISTRATIVE HEARING ROOM, FLORENCE, ARIZONA, TO CONSIDER THE FOLLOWING REQUEST FOR A MAJOR AMENDMENT TO THE 2019 PINAL COUNTY COMPREHENSIVE PLAN:

PZ-PA-006-23–PUBLIC HEARING/ACTION: Pinal County, requesting approval of a Major Comprehensive Plan Amendment to the 2019 **Pinal County Comprehensive Plan** to amend the text of **Chapter 7, Environmental Stewardship, Section: Energy, Sub-section- Renewable Energy Sources, and Appendix D**. The proposed amendment will modify the referenced chapter and provide to the Comprehensive Plan a guiding framework of Goals, Objectives, and Policies, for many Energy applications at different installation scales for Pinal County residents.

ALL PERSONS INTERESTED IN THIS MATTER MAY APPEAR AT THE PUBLIC HEARING AT THE DATE, TIME AND PLACE DESIGNATED ABOVE.

DOCUMENTS PERTAINING TO THIS CASE CAN BE FOUND ON THE NOTICE OF HEARING PAGE FOR THE P&Z COMMISSION AT:

<http://pinalcountyz.gov/CommunityDevelopment/Planning/Pages/NoticeofHearing.aspx#>

DATED this **21st** day of **September 2023**, Pinal County Community Development Dept.

TO QUALIFY FOR FURTHER NOTIFICATION IN THIS LAND USE MATTER YOU MUST FILE WITH THE PLANNING DEPARTMENT A WRITTEN STATEMENT OF SUPPORT OR OPPOSITION TO THE SUBJECT APPLICATION. YOUR STATEMENT MUST CONTAIN THE FOLLOWING INFORMATION:

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- 4) Whether or not your wish to appear and be heard at the hearing

WRITTEN STATEMENTS MUST BE FILED WITH:
PINAL COUNTY COMMUNITY DEVELOPMENT DEPARTMENT
PO BOX 2973 (85 N FLORENCE ST)
FLORENCE, AZ 85132

NO LATER THAN 5:00 PM ON OCTOBER 9, 2023.

Contacts for this matter: Sangeeta Deokar, Senior Planner

E-mail Address: sangeeta.deokar@pinal.gov

Phone: #(520) 866-6641 Fax: (520) 866-6530

Anything below this line is not for publication.

PUBLISHED ONCE:

Pinal Central Dispatch
Arizona Republic

**CASA GRANDE VALLEY
NEWSPAPERS INC**

200 W. 2ND ST.
CASA GRANDE AZ 85122

(520) 836-7461
Fax (520) 836-2944

Advertising Memo Bill

1 Memo Bill Period 09/2023		2 Advertiser/Client Name PINAL COUNTY COMMUNITY DEVELOP	
23 Total Amount Due 20.72		*Unapplied Amount	3 Terms of Payment
21 Current Net Amount Due .00	22 30 Days .00	60 Days .00	Over 90 Days .00
4 Page Number 1	5 Memo Bill Date 09/25/23	6 Billed Account Number 12870	7 Advertiser/Client Number CHRIS. 12870

8 Billed Account Name and Address PINAL COUNTY COMMUNITY DEVELOPMENT ATTN: ALICIA MENDEZ P.O. BOX 2973 FLORENCE AZ 85132		Amount Paid: Comments: Ad #: 181197
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Please Return Upper Portion With Payment

10 Date	11 Newspaper Reference	12 13 14 Description-Other Comments/Charges	15 SAU Size 16 Billed Units	17 Times Run 18 Rate	19 Gross Amount	20 Net Amount
09/28/23	181197 PCCHG AZTPT	PZ-PA-006-23 NOTICE OF PUBLIC HEARI 09/28 CGIT CGPC P# 249808 AZ TPT TAX	1.0X10.94 11.00	1 20.35 .37	20.35	20.72

COPY

PLEASE RETURN THIS
INVOICE WITH REMITTANCE
THANK YOU

Statement of Account - Aging of Past Due Amounts

21 Current Net Amount Due	22 30 Days	60 Days	Over 90 Days	*Unapplied Amount	23 Total Amount Due
0.00	0.00	0.00	0.00		20.72

CASA GRANDE VALLEY NEWSPAPERS INC.

(520) 836-7461

* UNAPPLIED AMOUNTS ARE INCLUDED IN TOTAL AMOUNT DUE

24 Invoice		25 Advertiser Information			
181197	1 Billing Period	6 Billed Account Number	7 Advertiser/Client Number	2 Advertiser/Client Name	
	09/2023	12870	12870	PINAL COUNTY COMMUNITY	

STATE OF ARIZONA

COUNTY OF PINAL

} ss.

Affidavit of Publication

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AT LEAST 24 HOURS PRIOR TO THE PUBLIC HEARING, DOCUMENTS PERTAINING TO THESE REQUESTS ARE AVAILABLE FOR PUBLIC INSPECTION AT THE PINAL COUNTY COMMUNITY DEVELOPMENT DEPARTMENT, PINAL COUNTY COMPLEX, 85 N. FLORENCE STREET, FLORENCE, ARIZONA, MONDAY THROUGH FRIDAY BETWEEN THE HOURS OF 8:00AM AND 4:30PM.

DATED this 21st day of September 2023, Pinal County Community Development Dept.

By: /s/Brent Billingsley
Brent Billingsley, Community Development Director

TO QUALIFY FOR FURTHER NOTIFICATION IN THIS LAND USE MATTER YOU MUST FILE WITH THE PLANNING DEPARTMENT A WRITTEN STATEMENT OF SUPPORT OR OPPOSITION TO THE SUBJECT APPLICATION. YOUR STATEMENT MUST CONTAIN THE FOLLOWING INFORMATION:

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PINAL COUNTY COMMUNITY DEVELOPMENT DEPARTMENT
PO BOX 2973 (85 N FLORENCE

FLORENCE, AZ 85132
NO LATER THAN 5:00 PM ON OCTOBER 9, 2023.
Contacts for this matter: Sangeeta Deokar, Senior Planner
E-mail Address: sangeeta.deokar@pinal.gov
Phone: #(520) 866-6641 Fax: (520) 866-6530
No. of publications: 1; date of publication: Sep. 28, 2023.

Kara K. Cooper, first being duly sworn deposes and says: That he/she is a native born citizen of the United States of America, over 21 years of age, that I am an agent and/or publisher of the Pinal Central Dispatch, a newspaper section published at Casa Grande, Pinal County, Arizona, Thursday of each week; that a notice, a full, true and complete printed copy of which is hereunto attached, was printed in the regular edition of said newspaper, and not in a supplement thereto, for ONE issue. The publications thereof having been on the following date:

09/28/2023

PINAL CENTRAL DISPATCH

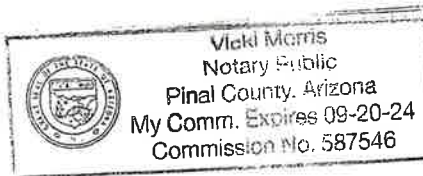
By *Kara K. Cooper*
agent and/or publisher of the Pinal Central Dispatch

Sworn to before me this *5th*

day of *Oct.* A.D. *2023*

Vicki Morris

Notary Public in and for the County
Of Pinal, State of Arizona



THE ARIZONA REPUBLIC

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Phone 1-602-444-7315

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AFFIDAVIT OF PUBLICATION

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PO BOX 1348
FLORENCE, AZ 85132-3027**

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Order # 0005833562 # of Affidavits 1

P.O # PZ-PA-006-23-PUBLIC HEARI

Issues Dated:

09/26/23, 09/27/23

**STATE OF WISCONSIN } SS.
COUNTY OF BROWN }**

I, being first duly sworn, upon oath deposes and says: That I am the legal clerk of the Arizona Republic, a newspaper of general circulation in the counties of Maricopa, Coconino, Pima and Pinal, in the State of Arizona, published weekly at Phoenix, Arizona, and that the copy hereto attached is a true copy of the advertisement published in the said paper in the issue(s) dated indicated.



Sworn to before me this

27 TH day of
SEPTEMBER 2023



Notary Public

My Commission expires: 9/25

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By: Brent Billingsley, Community Development Director

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E-mail Address: sangeeta.deokar@pinal.gov

Phone: (520) 866-6641
Fax: (520) 866-6530
Pub: Sept 27, 2023

VICKY FELTY
Notary Public
State of Wisconsin