Pinnacle West Capital Corporation - Climate Change 2022

C0. Introduction

C0.1

(C0.1) Give a general description and introduction to your organization.

Pinnacle West Capital Corporation (“the Company”), an energy holding Company based in Phoenix, has consolidated assets of about $19 billion, about 6,300 megawatts of generating capacity and 6,200 employees in Arizona and New Mexico. Through its principal subsidiary, Arizona Public Service Company (APS), the Company provides retail electricity service to nearly 1.3 million Arizona homes and businesses. This report contains forward-looking statements based on current expectations, including statements regarding our earnings guidance and financial outlook and goals. These forward-looking statements are often identified by words such as “estimate,” “predict,” “may,” “believe,” “plan,” “expect,” “require,” “intend,” “assume,” “project,” "anticipate," "goal," "seek," "strategy," "likely," "should," "will," "could," and similar words. Because actual results may differ materially from expectations, we caution you not to place undue reliance on these statements. A number of factors could cause future results to differ materially from historical results, or from outcomes currently expected or sought by Pinnacle West or APS. A discussion of some of these risks and uncertainties is contained in the Pinnacle West/APS 2021 Form 10-K and the Form 10-Qs for the quarters ended March 31, 2022, and June 30, 2022, and on our website, at PinnacleWest.com, which you should review carefully before placing any reliance on our disclosures set forth in this report. We assume no obligation to update any forward-looking statements, even if our internal estimates change, except as may be required by applicable law.

C0.2

(C0.2) State the start and end date of the year for which you are reporting data.

	Start date	End date	Indicate if you are providing emissions data for past reporting years	Select the number of past reporting years you will be providing emissions data for
Reporting year	January 1 2021	December 31 2021	No	<Not Applicable>

C0.3

(C0.3) Select the countries/areas in which you operate.

United States of America

C0.4

(C0.4) Select the currency used for all financial information disclosed throughout your response.

USD

C0.5

(C0.5) Select the option that describes the reporting boundary for which climate-related impacts on your business are being reported. Note that this option should align with your chosen approach for consolidating your GHG inventory.

Financial control

C-EU0.7

(C-EU0.7) Which part of the electric utilities value chain does your organization operate in? Select all that apply.

Row 1

Electric utilities value chain

Electricity generation
Transmission
Distribution

Other divisions

Smart grids / demand response
Battery storage
Micro grids

C0.8

(C0.8) Does your organization have an ISIN code or another unique identifier (e.g., Ticker, CUSIP, etc.)?

Indicate whether you are able to provide a unique identifier for your organization	Provide your unique identifier
Yes, an ISIN code	US7234841010

C1. Governance

C1.1

(C1.1) Is there board-level oversight of climate-related issues within your organization?

Yes

C1.1a

(C1.1a) Identify the position(s) (do not include any names) of the individual(s) on the board with responsibility for climate-related issues.

Position of individual(s)	Please explain
Chief Executive Officer (CEO)	The Chief Executive Officer (CEO), who is also the Chairman of the Board and President of Pinnacle West as well as the Chairman of the Board and CEO of Arizona Public Service Company, provides the vision and leadership to execute the Company's strategy and create shareholder value. Additionally, he has overarching responsibility for managing risk, including climate change and greenhouse gas risks that directly or indirectly impact our ability to execute to our mission and achieve our vision. One of the most significant effects of climate change in Arizona is drought: The state is in its 27th year of a long-term drought. Higher temperatures and extreme drought are expected to increase the severity, frequency and extent of wildfires, which harm the natural environment and human health. In 2021, the CEO supported the addition of enhanced measures to our Comprehensive Fire Mitigation Plan (CFMP). The CFMP is a multi-faceted approach to wildfire mitigation in our service territory with a central focus on prevention, mitigation, and response. Measures added include hardening key assets (like substation walls and distribution infrastructure), managing vegetation growth near equipment, and increasing the number of feeders included in our non-reclosing strategy during high-risk periods of the year. Responsibility for oversight of catastrophic fire events was assigned to the Board's Nuclear and Operating Committee.
Board Chair	The Chairman of the Board, President and CEO of Pinnacle West and Chairman of the Board and CEO of Arizona Public Service Company provides the vision and leadership to execute the Company's strategy and create shareholder value. Additionally, he has overarching responsibility for managing risk, including climate change risks that directly or indirectly impact our ability to execute to our mission and achieve our vision. The Board oversees the Company's risk management strategy and focuses on fostering a culture of risk awareness and risk-adjusted decision-making. They discuss the list of the Company's top risks and allocate responsibilities for such risks among the Board and the Board Committees. One of the physical risks in Arizona related to climate change that the Board monitored in 2021 was the risk of a catastrophic fire events, which were identified as an enterprise top risk in 2021. In 2021, the Board Chair supported the addition of enhanced measures to our Comprehensive Fire Mitigation Plan (CFMP). The CFMP is a multi-faceted approach to wildfire mitigation in our service territory with a central focus on prevention, mitigation, and response. Measures added include hardening key assets (like substation walls and distribution infrastructure), managing vegetation growth near equipment, and increasing the number of feeders included in our non-reclosing strategy during high- risk periods of the year. Responsibility for oversight of catastrophic fire events was assigned to the Board's Nuclear and Operating Committee. Responsibility for oversight of catastrophic fire events was assigned to the Board's Nuclear and Operating Committee.
Board-level committee	The Nuclear and Operating Committee has primary responsibility for the Company's sustainability initiatives and strategies, including climate change, environmental matters, and associated operational risks. The Committee reports regularly to the Board on its activities. The Committee also periodically reviews with management the principal risks related to the Company's nuclear, fossil generation, transmission and distribution, environmental, health and safety operations, and other matters, including security policies, programs and controls for protection of cyber and physical assets. One of the physical risks related to climate change that the Nuclear and Operating Committee monitored in 2021 was the risk of catastrophic fire events, which were identified as an enterprise top risk in 2021 due to higher temperatures and extreme drought. The Company uses a Comprehensive Fire Mitigation Plan, a multi-faceted approach to wildfire mitigation in our service territory with a central focus on prevention, mitigation, and response to manage the risk of catastrophic fire events. In addition, the Board's Corporate Governance and Public Responsibility Committee is responsible for the adoption and maintenance of good governance practices. This Committee also is responsible for reviewing significant environmental, social and governance (ESG) trends that may impact the Company (including climate-related trends and risks), ensuring the oversight of relevant ESG issues by the Board and its Committees, and making recommendations to the Board as appropriate.

C1.1b

(C1.1b) Provide further details on the board's oversight of climate-related issues.

Frequency with which climate-related issues are a scheduled agenda item	Governance mechanisms into which climate-related issues are integrated	Scope of board-level oversight	Please explain
Scheduled – some meetings	Reviewing and guiding risk management policies	<Not Applicable>	The Nuclear and Operating Committee has primary responsibility for the Company's sustainability initiatives and strategy, including climate change, environmental, health and safety (EH&S) matters, and associated operational risks. The Committee reports regularly to the Board on its activities. The Committee periodically reviews with management the principal risks related to or arising out of the Company's nuclear, fossil generation, transmission and distribution, EH&S and other matters. In addition, the Board's Corporate Governance and Public Responsibility Committee has primary responsibility for the adoption and maintenance of good governance practices. The Committee also is responsible for reviewing significant environmental, social and governance (ESG) trends that may impact the Company (including climate-related trends and risks), ensuring the oversight of relevant ESG issues by the Board and its Committees, and making recommendations to the Board as appropriate. The Company's Executive Risk Committee, comprised of cross-functional Company leadership and chaired by the Chief Administrative Officer, responsible for ensuring that the Board receives timely information concerning the Company's material risks and risk management processes, including climate change-related risk. The Executive Risk Committee provides the Board with a list of the Company's top risks on an annual basis, and each Board Committee receives periodic presentations from management about its assigned risk areas and discusses their risk reviews with the Board at least annually.

C1.1d

(C1.1d) Does your organization have at least one board member with competence on climate-related issues?

	Board member(s) have competence on climate-related issues	Criteria used to assess competence of board member(s) on climate-related issues	Primary reason for no board-level competence on climate-related issues	Explain why your organization does not have at least one board member with competence on climate-related issues and any plans to address board-level competence in the future
Row 1	No, but we plan to address this within the next two years	<Not Applicable>	Important but not an immediate priority	In 2022, we added Sustainability as a board competence skill to gain more understanding of board competence related to environmental matters that can include climate-related issues.

C1.2

(C1.2) Provide the highest management-level position(s) or committee(s) with responsibility for climate-related issues.

Name of the position(s) and/or committee(s)	Reporting line	Responsibility	Coverage of responsibility	Frequency of reporting to the board on climate-related issues
Chief Executive Officer (CEO)	<Not Applicable>	Both assessing and managing climate-related risks and opportunities	<Not Applicable>	More frequently than quarterly
Chief Financial Officer (CFO)	<Not Applicable>	Both assessing and managing climate-related risks and opportunities	<Not Applicable>	More frequently than quarterly
Other, please specify (Senior Vice President of Public Policy)	<Not Applicable>	Both assessing and managing climate-related risks and opportunities	<Not Applicable>	More frequently than quarterly
Chief Sustainability Officer (CSO)	<Not Applicable>	Both assessing and managing climate-related risks and opportunities	<Not Applicable>	More frequently than quarterly
Other, please specify (Director ESG Policy and Reporting)	<Not Applicable>	Both assessing and managing climate-related risks and opportunities	<Not Applicable>	More frequently than quarterly

C1.2a

(C1.2a) Describe where in the organizational structure this/these position(s) and/or committees lie, what their associated responsibilities are, and how climate-related issues are monitored (do not include the names of individuals).

CEO. The CEO's full title is Chairman of the Board, President and Chief Executive Officer of Pinnacle West, and Chairman of the Board and CEO of APS. The CEO and other Senior Officers participate in a Senior Officer forum. The Senior Officer forum, which meets twice a month, is comprised of senior executives who review, evaluate, assess, discuss and determine strategy on energy-related issues, including ESG and climate-related issues, risks and opportunities, and establish policies that support our long-term corporate strategy. The CEO is responsible for leading the Senior Officer forum and is responsible for ESG and climate-related decisions and the implementation of strategies, policies and initiatives on climate-related issues.

CFO. The full title is Chief Financial Officer (CFO). This position reports directly to the CEO. The CFO, as a member of the Executive Risk Committee (ERC), is responsible for assessing and managing climate-related risks and opportunities as they are presented to the members of the Senior Officer forum and/or to the ERC. In addition, the CFO meets regularly with the CEO to review climate-related issues that are being monitored by the Sustainability department (which is responsible for ESG policy and reporting).

Senior Vice President of Public Policy (SVP). This position reports directly to the CEO. The SVP is the sponsor of the ESG Executive Council. The ESG Executive Council provides governance and oversight for ESG-related activities and initiatives. The SVP is responsible for ensuring that ESG strategies align with the overall corporate strategic direction, including the consideration of climate-related risks and opportunities. The SVP also participates in the Senior Officer forum, whose members determine strategy on energy-related issues, including ESG and climate-related issues, risks and opportunities, and establish policies that support our long-term corporate strategy.

CSO. The CSO's full title is the Vice President of Sustainability, APS. This position reports directly to the SVP. The CSO has responsibility for both assessing and managing ESG policy and climate-related risks and opportunities. As a member and Chair of the ESG Executive Council, the CSO ensures cross functional oversight and alignment on ESG policy and reporting, emergent ESG issues, and climate-related risks and opportunities. The Council meets at least quarterly. The CSO also meets monthly with the Director to discuss and assess climate-related issues. The CSO is tasked with ensuring the SVP and COO are informed of material climate-related risks, and that mitigation measures are sufficient to ensure business continuity.

Director of ESG Policy and Reporting (Director). The Director's full title is Director of ESG Policy and Reporting and he has responsibility for the Sustainability department. This position reports directly to the CSO. The Director is responsible for both assessing and managing climate related risks and opportunities. The Director is responsible for ensuring that the CSO is informed of material climate-related risks and that mitigation measures are sufficient to ensure business continuity. The Director has a team of employees who are subject matter experts responsible for monitoring climate-related policy, driving Business Unit climate mitigation initiatives, assessing climate-related risks and opportunities, and briefing the Director at least monthly or as issues and concerns arise. Periodically, the Director provides updates on climate-related issues, including risks and opportunities, to the ESG Executive Council and/or the Senior Officer forum.

To support the Human Resources Committee's (HRC) request to develop a carbon reduction metric within the Long-Term Incentive Plan (LTIP), the CEO asked the Sustainability department to develop some options. In 2021, the Director lead a cross-functional team to develop and evaluate options and make a recommendation to executive management, including the CSO, SVP, CFO, CEO, and other officers. In 2021, our CEO recommended, and the HRC subsequently adopted, a new Clean Megawatts (MW) Installed metric that ties a portion of executive long-term incentive compensation to progress towards our Clean Energy Commitment interim milestones. (Our interim milestones are to achieve a 65% clean resource mix by 2030, 45% of our generation portfolio coming from renewable energy.) The new Clean MW Installed metric establishes targets and measures performance related to the installation of clean, renewable, or other carbon-free resources over a rolling three-year average, commencing in 2022.

C1.3

(C1.3) Do you provide incentives for the management of climate-related issues, including the attainment of targets?

	Provide incentives for the management of climate-related issues	Comment
Row 1	Yes	

C1.3a

(C1.3a) Provide further details on the incentives provided for the management of climate-related issues (do not include the names of individuals).

Entitled to incentive	Type of incentive	Activity incentivized	Comment
Corporate executive team	Monetary reward	Emissions reduction target	Our compensation programs focus on transparency with an emphasis on incentivizing performance. APS's compensation philosophy incorporates multiple business performance metrics. One example is the Palo Verde Generation Station's (PVGS) capacity factor is an example. PVGS has been the nation's largest producer of clean, carbon-free energy for 30 years and is critical to the Company's ability to achieve its clean energy goals and mitigate the effects of climate change. In 2021, PVGS's capacity factor target was 98.7%, and the plant reached an actual capacity factor of 98.65%. As a result, Palo Verde generated more than 32 million megawatt-hours of clean, carbon-free electricity. APS operates PVGS and owns or leases 29.1% of the plant. In 2021, we adopted a new Clean Megawatts (MW) Installed metric. To support the Human Resources Committee's (HRC) request, our CEO directed the Director of ESG Policy and Reporting to lead a cross-functional team to develop a carbon reduction metric within the executive Long-Term Incentive Plan (LTIP). The HRC subsequently adopted this metric into the LTIP in early 2022, tying a portion of executive long-term incentive compensation to progress towards the interim milestones of our Clean Energy Commitment. (Our interim milestones are to achieve a 65% clean resource mix by 2030, 45% of our generation portfolio coming which comes from renewable energy.) The new Clean MW Installed metric establishes targets and measures performance related to the installation of clean, renewable or other carbon-free resources over a rolling three-year average, starting with the 2022-2024 time period.
Corporate executive team	Monetary reward	Emissions reduction target	Our compensation programs focus on transparency with an emphasis on incentivizing performance. APS's compensation philosophy incorporates multiple business performance metrics. One example is the Palo Verde Generation Station's (PVGS) capacity factor is an example. PVGS has been the nation's largest producer of clean, carbon-free energy for 30 years and is critical to the Company's ability to achieve its clean energy goals and mitigate the effects of climate change. In 2021, PVGS's capacity factor target was 98.7%, and the plant reached an actual capacity factor of 98.65%. As a result, Palo Verde generated more than 32 million megawatt-hours of clean, carbon-free electricity. APS operates PVGS and owns or leases 29.1% of the plant.
Business unit manager	Monetary reward	Emissions reduction target	Our Business Unit managers' compensation programs focus on transparency with an emphasis on incentivizing performance. APS's compensation philosophy incorporates multiple business performance metrics. including nuclear capacity factor, to assess performance. One example is the Palo Verde Generation Station's (PVGS) capacity factor is an example. PVGS has been the nation's largest producer of clean, carbon-free energy for 30 years and is critical to the Company's ability to achieve its clean energy goals and mitigate the effects of climate change. In 2021, PVGS's capacity factor target was 98.7%, and the plant reached an actual capacity factor of 98.65%. As a result, Palo Verde generated more than 32 million megawatt-hours of clean, carbon-free electricity. APS operates PVGS and owns or leases 29.1% of the plant.
All employees	Monetary reward	Emissions reduction project	Eligible employees receive annual cash incentives based on the achievement of specified performance goals, with a focus on transparency and an emphasis on incentivizing performance. APS's compensation philosophy incorporates multiple business performance metrics, including nuclear capacity factor, to assess performance.
Business unit manager	Non-monetary reward	Other (please specify) (All of the above, based on business unit.)	As part of the formula to determine performance ratings, Business Unit managers receive ratings based on the achievement of specified performance goals. Some Business Unit managers have goals and metrics that are related to climate change, including for example, carbon intensity goals, percent clean and energy efficiency targets, and others. The performance of each Business Unit is important to the success of the Company.
All employees	Non-monetary reward	Other (please specify) (All of the above, based on business unit.)	As part of the formula to determine performance ratings, all eligible employees receive ratings based on the achievement of specified performance goals. Some employees have metrics that are related to climate change issues, including for example, carbon intensity, percent clean, and energy efficiency targets, paperless billing adoption, and others. The performance of each Business Unit is important to the success of the Company.

C2. Risks and opportunities

C2.1

(C2.1) Does your organization have a process for identifying, assessing, and responding to climate-related risks and opportunities?

Yes

C2.1a

(C2.1a) How does your organization define short-, medium- and long-term time horizons?

	From (years)	To (years)	Comment
Short-term	0	1	Short-term horizons are used to plan for the upcoming fiscal year to track to short-term goals from each Business Unit. Emergent risks are often identified in short-term time horizons with ultimate longer-term implications.
Medium-term	1	5	Medium-term horizons are typically used for the business planning process and by the Integrated Resource Planning team.
Long-term	5	30	Long-term horizons are used by the Integrated Resource Planning team, Enterprise Risk Management and Corporate Strategy to ensure the business is planning for and assessing future risks and opportunities, and to support a sustainable future for Arizona.

C2.1b

(C2.1b) How does your organization define substantive financial or strategic impact on your business?

APS defines substantive or strategic impact to the business based on whether an observed or anticipated effect is large enough to be meaningful within the context of financial, operational, reputational or safety assessments. To determine whether a risk will result in substantive or strategic impact, the Enterprise Risk Management (ERM) department has established a formal process by which Business Units identify and assess risks, including climate-related risks, consistent with our overall enterprise risk framework. The ERM framework is a depiction of how the Company to identifies, assesses, mitigates and controls risks. Under the ERM framework, Business Units assign values to each risk for financial, operational, reputational and safety impacts utilizing a 0-4 threshold; levels 3-4 are considered substantive.

For financial impact, the thresholds are described as follows:

(04) - Major means an impact of greater than $25M;

(03) - Significant means an impact between $15M and $25M;

(02) - Moderate means an impact between $5M and $15M;

(01) - Limited means an impact between $2M and $5M;

(00) - Very limited means an impact between $0 and $2M.

For operational impact, the thresholds are described as follows:

(04) - Major means potential for grid instability leading to large-scale blackouts due to generation or transmission related voltage and frequency instabilities;

(03) - Significant means potential for rolling blackouts at times when the demand exceeds supply (large geographical area effects) or an event which has a reasonable probability of significantly negatively impacting the Company's operational objectives;

(02) - Moderate means outages arising from a major line or circuit outage impacting greater than 50,000 customers or an event which has a reasonable probability of moderate negative impact to the Company's operational objective;

(01) - Limited means local outages caused by pole collapse, pole fires or transformer problems usually impacting a smaller geographical area or an event which has a reasonable probability of limited negative impact to the Company's operational objective.

(00) - Very limited means no outages or local outages of a very small duration.

For reputational impact, the thresholds are described as follows:

(04) - Major means an event that generates local/national media coverage or causes a dramatic change in confidence with public, employees and/or stakeholders and/or results in negative action by regulators, with the impact lasting more than twelve months;

(03) - Significant means an event that generates local/national media coverage or causes a significant change in confidence with public, employees and/or stakeholders and/or attracts attention of regulators, with the impact lasting more than three months;

(02) - Moderate means an event that generates local/national media coverage or causes a moderate change in confidence with public, employees and/or stakeholders, with the impact lasting between one and three months;

(01) - Limited means a complaint or recognition at a localized (contained) level with minimal change to stakeholder confidence, with impact lasting less than one month;

(00) - Very limited means little or no impact.

For safety impact, the thresholds are described as follows:

(04) - Major means life-impacting injuries and/or fatalities to employees may result, significant impact to public health may result or evacuation is necessary;

(03) - Significant means lost-time injuries to employees may result and/or moderate impact to public health may result;

(02) - Moderate means moderate injuries, including OSHA recordable injuries, with short-term impacts to employees or minor impact to the public health may result;

(01) - Limited means minor injuries to employees may result or no impact to public health or impact to public is immediately correctable;

(00) - Very limited means no resulting injuries to employees or the public, including for example "close calls."

C2.2

(C2.2) Describe your process(es) for identifying, assessing and responding to climate-related risks and opportunities.

Value chain stage(s) covered
Direct operations
Upstream
Downstream

Risk management process
Integrated into multi-disciplinary company-wide risk management process

Frequency of assessment
More than once a year

Time horizon(s) covered
Short-term
Medium-term
Long-term

Description of process
The Enterprise Risk Management (ERM) department facilitates the establishment and implementation of governance over and process(es) related to identifying, assessing and reporting material risks inherent to the Company's business, including both physical and transitional climate-related risks. Risks are identified, defined, assessed and prioritized based on the likelihood and impact of their occurrence. Due to the complexity of operational, financial and regulatory environments, APS has numerous risk objectives and obligations, which are addressed by policies, controls, processes and programs. Risks are identified, defined, assessed and mitigated at an asset level. APS identifies and assesses climate-related risks in a manner consistent with our overall enterprise risk management framework. The ERM framework is a depiction of how the Company identifies, assesses, mitigates and controls risks. The ERM process is one of the Company's efforts within this framework. The ERM process at APS is a formal process by which Business Units and the ERM group support the Executive Risk Committee (ERC) as it carries out responsibilities set forth in the ERC charter. This includes the following and includes climate-related risks: No less than annually, the ERC, in conjunction with the ERM group develops an enterprise risk management profile of the organization based on risk identification and assessments from the organization's Business Units and ERM group. The chairperson of the ERC or his designee presents that profile to the Chairman of the Board & Chief Executive Officer. No less than annually, the ERC presents highly critical risks to the Board of Directors. No less than quarterly, or as often as the Chairperson determines to be necessary, the Business Unit, which is assigned ownership of the risk, with support from the ERM group, reviews and monitors relevant material organizational risks with members, participants and delegates of the ERC. Business Units maintain an inventory of their most significant short-term, medium-term, and long-term risks and associated risk response plans. This includes significant risks on our direct operations as well as our upstream and downstream value chains. On an annual basis, Business Units record this information in a prescribed format, for analysis, categorization and prioritization of risks to support development of an enterprise risk profile. Risk prioritization can include an assessment of likelihood, impact, risk direction, velocity, external evidence, feasibility and cost of mitigation. Quantitative correlation analysis is used for Company projects and business scenarios to provide probability distributions of cost contingencies and schedule uncertainties for multiple risk drivers. Additionally, the Company utilizes qualitative analysis through periodic risk workshops, focusing on risk drivers, potential consequences and existing mitigation efforts. These types of sensitivity analyses are used to identify factors affecting the budget and timing of projects, leading to more effective and efficient mitigation strategies. Opportunities are prioritized based on their ability to assist in meeting or exceeding targets. The ERM process receives input from and provides output to the execution and implementation of the Company's risk policies and controls, the business planning process and Business Units' specific risk management programs. However, the ERM process does not direct or control these policies, processes or programs, as they are exclusively within the control and purview of the responsible Business Units. Transitional Risk: In 2021, the ERM identified and assessed the potential transitional risks of emerging decarbonization regulations and policies, by both state and federal regulators. Both federal legal compliance and liability and Arizona utility regulation were identified as enterprise top risks in 2021. An emergent climate-related regulatory risk in 2021 is the potential for promulgation of a carbon tax or cap-and-trade program. Carbon tax costs are challenging to forecast because, despite numerous efforts, the federal government has not reached policy consensus on the magnitude, timing or need for a carbon tax. It is difficult to forecast what final form that regulation may take; nonetheless, APS included the potential for carbon pricing in its 2020 Integrated Resource Plan (IRP). The CO2 cost included in the IRP analysis was based on the California market cap-and-trade 2020 CO2 cost of $16.68, escalated at 2.5% beginning in 2025. Prior to 2025, APS's analysis assumed the CO2 cost to be $0. The resulting potential impact based on these assumptions and projected carbon emissions from 2020 through 2035 is $1,278M-$1,658M. To mitigate this transitional risk, APS maintains specialized environmental and public policy consultants who review and track local, state and federal environmental regulations, which may impact APS's current and future operational goals. Responsibility for oversight of the federal legal compliance and liability risk was allocated to the entire Board, and oversight for the Arizona utility regulation risks was allocated to the Board's Corporate Governance and Public Responsibility Committee. Physical Risk: In 2021, the ERM also identified heightened risk of a catastrophic fire event as a climate-related physical risk, resulting from changes in precipitation patterns and extreme variability in weather patterns, and the resulting potential impact to operating costs. Catastrophic fire events were identified as an enterprise top risk in 2021. Due to extended drought over the past decade, forests and vegetation have been stressed from lack of regular and sufficient moisture, compounded by shorter, drier winters and longer, warmer summers. These changes in weather patterns pose a fire risk to the communities we serve. Wildfire risks have the potential to cause damage to our facilities, including transmission, generation, or distribution, which may increase operating costs and decrease revenues. To effectively respond to this risk, we work to create defensible space throughout Arizona. With approximately 5,900 miles of transmission lines and 34,100 miles of distribution lines throughout Arizona, the potential threat to our system from wildfires is very real. Responsibility for oversight of a catastrophic fire event was allocated to the Board's Nuclear and Operating Committee.

C2.2a

(C2.2a) Which risk types are considered in your organization's climate-related risk assessments?

	Relevance & inclusion	Please explain
Current regulation	Relevant, always included	One example of climate-related risk within current regulations is compliance with regional and national regulation. This risk is considered in our ERM process based on assessments conducted by the Business Unit manager and the ERM group. There are numerous financial and operational risks inherent in managing mandatory compliance with the Company's vast and continually evolving regional and federal regulatory requirements. The risk is recorded and monitored to determine the magnitude of the risk and the associated mitigated measures. This risk is considered a (03) rating in terms of reputational significance and a (01) rating in terms of financial significance. An example of a climate-related regulation is the national and regional reporting requirements for greenhouse gas emissions. In 2019, EPA finalized the Affordable Clean Energy (ACE) Rule. During 2020, APS developed a comprehensive compliance plan for its anticipated ACE Rule obligations. In 2021, the D.C. Circuit vacated the ACE Rule and remanded it to the Environmental Protection Agency for further proceedings consistent with its opinion. In 2021, the Clean Electricity Performance Program (CEPP) was proposed in Congress to reduce greenhouse gas emissions (GHG) by establishing targets and fines for the electric power sector; the CEPP proposal required extensive analysis and evaluation to determine potential impacts. Regardless of these risks, APS continues to transition its energy assets away from high carbon intensity assets (coal) to low or no carbon intensity assets (natural gas, renewables, storage), consistent with our Clean Energy Commitment to deliver 100% clean, carbon-free electricity by 2050.

	Relevance & inclusion	Please explain
Emerging regulation	Relevant, always included	The legal risk of increased litigation, including the cumulative effects of the legal/compliance requirements, is considered in our ERM process based on assessments conducted by the Business Unit manager and the ERM group. The risk is recorded and monitored to determine the magnitude of the risk and the associated mitigation measures. This risk is considered a (04) rating in terms of financial significance and a (03) rating in terms of reputational significance. There are several legislative and regulatory carbon-related actions that may impact future strategic resource decisions and are considered potential transitional risks that may impact operating costs. The utility industry may face alternative efforts from parties seeking to establish greenhouse gas (GHG) emission limitations for power plants. In 2019, the EPA took action to repeal the Clean Power Plan which targeted existing power plants and replaced it with the Affordable Clean Energy (ACE) Rule, subject to pending judicial review in the U.S. Court of Appeals for the District of Columbia. In 2021, the D.C. Circuit vacated the ACE Rule and remanded it to the EPA for further proceedings. In 2021, the Clean Electricity Performance Program (CEPP) was proposed in Congress as a policy aimed at reducing GHG emissions by establishing targets and fines for the electric power sector; the CEPP proposal required extensive analysis and evaluation to determine potential impacts. In addition, commencing in 2021, the U.S. Securities and Exchange Commission (SEC) is considering requirements for certain companies to report Scope 1-3 GHG emissions to the SEC, creating a mandatory regulatory environment for GHG emissions reporting. This rule, when finalized, could increase the potential for legal challenges over quantification or representation of GHG climate impacts. Regardless of these risks, APS continues to transition its energy assets away from high carbon intensity assets (coal) to low or no carbon intensity assets (natural gas, renewables, storage), consistent with our Clean Energy Commitment to deliver 100% clean, carbon-free electricity by 2050.
Technology	Relevant, always included	The risk of the impacts associated with disruptive technologies is considered in our ERM process based on assessments conducted by the Business Unit manager and the ERM group. The risk is recorded and monitored to determine the magnitude of the risk and the associated mitigated measures. This risk is considered a (04) rating in terms of financial significance, a (03) rating in terms of operational significance and a (04) rating in terms of reputational significance. Risk associated with new technologies remains an acute concern for APS. As more emerging technologies, such as energy storage devices, become commercially viable, they will continue to change how our customers interact with us. This may require us to make changes to our energy delivery and generation to be more responsive to customers' needs, while balancing grid efficiency, reliability, and affordability. By being proactive and working with our customers to identify and respond to their changing needs, we remain well positioned to deliver value. These technology risks may cause potential resource substitutions and diversification that may impact our ability to operate in various conditions as demand for electricity shifts and diversifies. To address this shift to new technologies, APS is deploying a wide array of new distributed energy resource (DER) technologies to provide clean, reliable, affordable energy to its customers. These include battery storage, thermal storage, load management, electric vehicles and other beneficial electrification technologies that have the potential to increase the value of intermittent generation resources as well as increase grid reliability and stability. APS has several current and future planned initiatives that utilize DER technologies. Given the array of potential applications for energy storage, APS evaluates storage technologies on an ongoing basis. Since we announced our Clean Energy Commitment in 2020, we've procured nearly 1,400 megawatts of clean energy and storage – all of which are expected to be in service for APS customers no later than 2024. All 1,400 megawatts were procured through competitive solicitations, ensuring competitive pricing for new resources as we plan to serve our growing economy.
Legal	Relevant, always included	The legal risk of increased litigation, including the cumulative effects of the legal/compliance requirements, is considered in our ERM process based on assessments conducted by the Business Unit manager and the ERM group. The risk is recorded and monitored to determine the magnitude of the risk and the associated mitigation measures. This risk is considered a (04) rating in terms of financial significance and a (03) rating in terms of reputational significance. There are several legislative and regulatory carbon-related actions that may impact future strategic resource decisions and are considered potential transitional risks that may impact operating costs. The utility industry may face alternative efforts from parties seeking to establish greenhouse gas (GHG) emission limitations for power plants. In 2019, the EPA took action to repeal the Clean Power Plan which targeted existing power plants and replaced it with the Affordable Clean Energy (ACE) Rule, subject to pending judicial review in the U.S. Court of Appeals for the District of Columbia. In 2021, the D.C. Circuit vacated the ACE Rule and remanded it to the EPA for further proceedings. In 2021, the Clean Electricity Performance Program (CEPP) was proposed in Congress as a policy aimed at reducing greenhouse gas emissions (GHG) through the establishment of targets and fines impacting the electric power sector requiring analysis and evaluation. In addition, in 2021, the Securities and Exchange Commission (SEC) is considering requirements for certain companies to report Scope 1-3 GHG emissions to the SEC creating a mandatory as opposed to voluntary regulatory environment for GHG emissions reporting, which could arguably increase the potential for legal challenge over quantification or representation of GHG climate impacts. Regardless of these risks, APS continues to transition its energy assets away from high carbon intensity assets (coal) to low or no carbon intensity assets (natural gas, renewables, storage) consistent with our Clean Energy Commitment to deliver 100% clean, carbon-free electricity by 2050.
Market	Relevant, always included	The market risk of a potential water supply shortage and increased demand is considered in our ERM process based on assessments conducted by business area manager and the ERM group. The risk is recorded and monitored to determine the magnitude of the risk and the associated mitigation measures. This risk is considered a (04) rating in terms of financial significance, a (02) rating in terms of operational significance, and a (04) rating in terms of reputational significance. One potential shift in the market in the desert Southwest is a potential water supply shortage and increased demand. Water in the Southwest is a limited resource. However, APS has been diligent and forward-looking in its efforts to find and secure sufficient water supplies for current and future power generation. Although there could be both financial and operational risk if sufficient water is not available to meet APS needs, the probability of this happening is low , because APS has robust water contingency plans, in addition to its assured water supplies. Two APS plants have water risk if surface water supplies are lost in a shortage: Sundance, and Four Corners. Sundance is protected by a water contract with the Gila River Indian Community. Indian priority water rights are high priority rights, with very low risk of curtailment. Four Corners is protected by new management strategies employed by the U.S. Bureau of Reclamation to keep more water in Navajo Reservoir. APS investment in water for the future includes purchase of effluent under contract through 2050 for Palo Verde, to be extended if needed. It also includes purchase of long-term storage credits from the Gila River Indian Community to supply high priority water to the Sundance Power Plant. These long-duration contracts provide assured water at a known price and ensure reliable, continuous availability of water for power generation.
Reputation	Relevant, always included	The reputation risk of catastrophic fire safety is considered in our ERM process based on assessments conducted by the business unit manager and the ERM group. The risk is recorded and monitored to determine the magnitude of the risk and the associated mitigation measures. This risk is considered a (04) rating in terms of financial significance, a (03) rating in terms of operational significance, a (04) rating in terms of reputational significance and a (04) rating in terms of safety significance. APS has taken great care to build our reputation over many years. Our commitment to our mission of creating a sustainable energy future for Arizona is a driving force in maintaining our reputational risk . For this reason, reputation is always considered when evaluating enterprise risks. We pride ourselves on delivering clean, reliable and affordable energy for our customers. Catastrophic fire events were identified as an enterprise risk in 2021. Catastrophic fire risk is a climate-related reputational risk due to precipitation patterns and extreme variability in weather patterns, with a potential financial impact to operating costs. Many of our facilities, including transmission, generation, or distribution equipment are located in areas prone to wildfire risk in Arizona and New Mexico. Fire events may increase operating costs for cost of repairing damaged facilities, impact the reliability of services, resulting in decreased revenues and hurting our reputation. In addition, a fire related to equipment failure or environmental fire event could negatively impact the Company's reputation or standing in the community. Through proactive fire-mitigation measures, APS works to reduce the likelihood of fire in and around electrical equipment. Mitigation initiatives include the deployment of infrastructure systems technology as well as mobile technology to track and report fires. These technological innovations allow us to be more proactive and nimble in our coordination and response efforts.
Acute physical	Relevant, always included	The physical risk of wildfires due to changes in physical climate parameters are considered in our ERM process based on assessments conducted by the Business Unit manager and the ERM group. The risk is recorded and monitored to determine the magnitude of the risk and the associated mitigation measures. This risk is considered a (04) rating in terms of financial significance, a (03) rating in terms of operational significance, a (04) rating in terms of reputational significance and a (04) rating in terms of safety significance. Catastrophic fire events were identified as an enterprise top risk in 2021. Due to extended drought over the past decade, forests and vegetation have been stressed from lack of regular and sufficient moisture, compounded by shorter, drier winters and longer, warmer summers. These changes in weather patterns pose a fire risk to the communities we serve. Wildfire risks have the potential to cause damage to our facilities, including transmission, generation, or distribution lines throughout Arizona, which may increase operating costs as a result of repair damaged facilities or impact the reliability of services, resulting in decreased revenues. With approximately 5,900 miles of transmission lines and 34,100 miles of distribution lines throughout Arizona, the potential threat to our system from wildfires is very real. APS is always focused on wildfires, planning year-round and continually strengthening the system so that customers can feel confident in our ability to serve them. Through proactive fire-mitigation measures, APS works to reduce the likelihood of fire in and around electrical equipment. Mitigation initiatives include the deployment of infrastructure systems technology as well as mobile technology to track and report fires. We also have proactively increased our system resiliency, implemented forest management programs to mitigate the risk of wildfires, and developed rapid-response plans to promptly restore power after storms. We also work to mitigate the threat of fire to our transmission system. To reduce risk to our power lines and first responders working during wildfires, we make a priority of creating defensible space to address vegetation around equipment poles. Our goal is to remove combustible material within a minimum 10-foot radius around equipment poles. Our right-of-way, which is cleared of vegetation, is used by firefighters to stop, anchor and suppress wildfires.
Chronic physical	Relevant, always included	The risk of a reduction in water supplies is considered in our ERM process based on assessments conducted by the Business Unit manager and the ERM group. The risk is recorded and monitored to determine the magnitude of the risk and the associated mitigated measures. This risk is considered (02) rating in terms of financial impact, a (00) as operational impact and (02) as reputational impact. In the long term, water supplies may be at risk due to climate change. Declining water reservoirs will require adaptation and new technological and policy solutions for water management. In 2021, U.S. Secretary of the Interior declared the first-ever Tier 1 shortage on the Colorado River. Even in the event of a more severe water shortage declaration if a future shortage is declared on the Colorado River, APS power plants will not be impacted due to water rights, contracts, agreements, and reliance on essentially drought-proof treated effluent. However, perceptions of water shortages could result in unfavorable press, loss of investor confidence, and limits in municipal, commercial, or industrial growth. APS Water Resource Management (WRM) is responsible for securing primary, secondary and contingent water supplies for nine power plants, through a combination of water rights, water contracts and agreements. WRM also constructs and maintains reliable pumping, delivery and water storage infrastructure. The APS generation fleet consists of the Palo Verde Generating Station (nuclear), Cholla and Four Corners Power Plants (coal), and six natural gas-fired plants: Redhawk, West Phoenix, Ocotillo, Sundance, Yucca and Saguaro Power Plants. These plants use three sources of water primarily for cooling water, but also for drinking water and high-purity process water: treated effluent (73%), surface water (14%) and groundwater (13%). WRM manages water conservation programs and strategies for all plants, designed to reduce water consumption and improve efficiency over time, and manages other programs such as the well and pumping equipment reliability program that ensures water supplies can be reliably delivered to the plants when needed.

C2.3

(C2.3) Have you identified any inherent climate-related risks with the potential to have a substantive financial or strategic impact on your business?
Yes

C2.3a

(C2.3a) Provide details of risks identified with the potential to have a substantive financial or strategic impact on your business.

Identifier
Risk 1

Where in the value chain does the risk driver occur?
Direct operations

Risk type & Primary climate-related risk driver

Emerging regulation	Carbon pricing mechanisms

Primary potential financial impact
Increased indirect (operating) costs

Climate risk type mapped to traditional financial services industry risk classification
<Not Applicable>

Company-specific description
Transition risks for APS in 2021 that may have financial impact on our operating costs are climate change litigation and legislative and regulatory efforts to limit greenhouse gas (GHG) emissions. Although there are no current or planned congressional attempts to pass cap-and-trade legislation to regulate GHG emissions, in the event such legislation ultimately passes, the actual economic and operational impact to APS depends on a variety of factors, none of which can be fully known at this time. Factors include allowable GHG emissions; cost to reduce emissions; how any allowable emissions will be allocated to sources; the associated costs; and whether offsets and other measures to moderate the costs of compliance will be available. However, for numerous years the APS Integrated Resource Plan has included a “cost of carbon,” which is factored into resource allocation decisions to address this potential cost to operations. Carbon tax costs are challenging to forecast because, despite numerous efforts, the federal government has not reached policy consensus on the magnitude, timing or need for a carbon tax. It is difficult to forecast what final form that regulation may take; nonetheless, during 2019, the EPA took action to repeal the Clean Power Plan and replace it with the Affordable Clean Energy Rule, which was subsequently vacated and remanded back to the EPA. While the outcome is still unpredictable, APS evaluated carbon costs in our resource planning effort, assuming that carbon legislation will occur at either the state or federal level and carbon pricing will take effect in 2025. APS has included the potential for carbon pricing in its 2020 Integrated Resource Plan (IRP). The CO2 cost included in the IRP analysis was based on the California market cap-and-trade 2020 CO2 cost of $16.68, escalated at 2.5% beginning in 2025. Prior to 2025, APS’s analysis assumed the CO2 cost to be $0. Based on financial modelling, the resulting potential impact based on these assumptions and projected carbon emissions from 2020 through 2035 is $1,278 million-$1,658 million. These costs would result in higher revenue requirements recovered through a rate case or adjustor mechanisms. A carbon cost will continue to be integrated into future scenarios as we work with stakeholders on future resource plans.

Time horizon
Medium-term

Likelihood
Likely

Magnitude of impact
Medium-high

Are you able to provide a potential financial impact figure?
Yes, an estimated range

Potential financial impact figure (currency)
<Not Applicable>

Potential financial impact figure – minimum (currency)
1278000000

Potential financial impact figure – maximum (currency)
1658000000

Explanation of financial impact figure
One of the most likely but unpredictable outcomes is a carbon tax. Carbon tax costs are challenging to forecast because, despite numerous efforts, the federal government has not reached policy consensus on the magnitude, timing or need for a carbon tax. It is difficult to forecast what final form that regulation may take; nonetheless, APS has included the potential for carbon pricing in its 2020 Integrated Resource Plan (IRP). The CO2 cost included in the IRP analysis was based on the California market cap-and-trade 2020 CO2 cost of $16.68, escalated at 2.5% beginning in 2025. Prior to 2025, APS’s analysis assumed the CO2 cost to be $0. The resulting potential impact based on these assumptions and projected carbon emissions from 2020 through 2025 is $1,278 million - $1,658 million. These costs would result in higher revenue requirements recovered through a rate case or adjustor mechanisms.

Cost of response to risk
500000

Description of response and explanation of cost calculation
There is a yearly management cost of about $500,000, approximately 50% for personnel costs and 50% for various trade group memberships, tracking tools and services needed to monitor, evaluate and address the risk of emerging carbon-related regulation. ($250K +$250k = $500k). The Sustainability Department at APS has three Policy Consultants and one Director, with one Policy Consultant focused on carbon, climate and environmental issues. The Consultant and Director work with the various APS Business Units to ascertain, review and track local, state, and federal environmental regulations that have the potential to impact APS’s current and future operational goals. Memberships in various trade groups, and subscriptions to various tracking tools, keep the team alerted to proposed regulations, and help us understand potential impacts to the industry. APS engages with the regulatory community to understand and track emergent environmental regulations that may impact our current and future operational goals. The Consultant and Director meet monthly with the environmental support team and leadership to make sure that any regulations that have changed or are potentially being proposed are assessed for potential risks or opportunities. For example, in 2019 EPA finalized the Affordable Clean Energy Rule, establishing greenhouse gas emissions (GHG) standards for existing utility generation. In 2021, the Clean Electricity Performance Program was proposed in Congress as a policy aimed at reducing GHG through the establishment of targets and fines impacting the electric power sector. The Consultant and Director reviewed the proposals with the operations, engineering, environmental and legal teams to assess the risk of potential financial and operating impacts as well as compliance obligations. While these proposed

regulations and legislation did not go into effect, they required analysis and preparation.

Comment

Identifier
Risk 2

Where in the value chain does the risk driver occur?
Direct operations

Risk type & Primary climate-related risk driver

Chronic physical	Other, please specify (Changes in precipitation patterns and extreme variability in weather patterns)

Primary potential financial impact
Increased capital expenditures

Climate risk type mapped to traditional financial services industry risk classification
<Not Applicable>

Company-specific description
In 2021, the risk of a reduction in available water supply is an example of a risk that has potential financial impact requiring increased capital expenditures. The risk of reduction in water supply is driven by changes in precipitation patterns and extreme variability in weather patterns which can create the physical conditions leading to drought. Since water can be a scarce resource in the Southwest, any change in precipitation or extended droughts driven by climate change brings with it inherent risks for APS and could materially impact on our business and operations. However, since its inception over a century ago, APS has been diligent and forward-looking in its efforts to find and secure sufficient water for current and future power generation. APS has an entire Business Unit dedicated to assessing and addressing our current and future water needs. In 2021, water risk was considered in our Enterprise Risk Management (ERM) process based on assessments conducted by the Business Unit manager and the ERM group. The risk is recorded and monitored to determine the magnitude of the risk and the associated mitigated measures. In 2020, this risk was considered (02) rating in terms of financial impact, which is a moderate potential impact of $5 million to $25 million. 2021 was an unusual year for water availability in the state due to significant amounts of rain and above-average snowpack. However, 2021 was considered an isolated occurrence, as 2020 was one of the driest monsoon seasons on record for the region, further expanding extreme and exceptional drought conditions. In the Western U.S., water resources and availability are long-term issues, and full drought recovery requires several years of above average precipitation to replenish reservoirs or aquifers. One potential drought-related projects could result in expenditures of $2- $3 million in capital costs. If drought results in lost access to surface water due to a shortage declaration on the Colorado River, agricultural users near the Sundance Power Plant could revert to pumping groundwater. This new groundwater pumping could lower the water table to levels that could require APS to drill a new deeper well at a cost of $2 - $3 million.

Time horizon
Medium-term

Likelihood
Likely

Magnitude of impact
Medium-high

Are you able to provide a potential financial impact figure?
Yes, an estimated range

Potential financial impact figure (currency)
<Not Applicable>

Potential financial impact figure – minimum (currency)
2000000

Potential financial impact figure – maximum (currency)
3000000

Explanation of financial impact figure
The potential financial impacts of the drought are difficult to quantify precisely. However, one potential drought-related projects could result in expenditures of $2-3 million in capital costs. If drought results in the loss of surface water due to a shortage declaration on the Colorado River, agricultural users near the Sundance Power Plant could revert to pumping groundwater. This new groundwater pumping could lower the water table to levels that require drilling a new, deeper replacement well at a cost of $2-3 million.

Cost of response to risk
4000000

Description of response and explanation of cost calculation
Because water supplies are so integral to the operations at APS, we have an entire Water Resource Management (WRM) department comprised of six employees, with an operations and maintenance budget of approximately $1.5 million a year. The budget is primarily personnel costs, approximately $1 million, and approximately $500,000 for outside services contracts to support the business. This management team assesses and manages current as well as future risk associated with drought and extreme weather. ($1M + $0.5M = $1.5M) APS has identified both primary water supplies and contingencies for each power plant to ensure reliable long-term operation, even in times of shortage, such as extended drought. APS owns and operates 43 production wells that provide cooling water and supplemental water to support generation at eight of nine power plants. Unplanned well and pumping equipment failures can occur as a result of pumping equipment failure, electrical/mechanical issues, well casing problems, or human performance errors. These failures could disrupt scheduled maintenance plans, result in unplanned/unbudgeted costs, and result in loss of water necessary to support generation. The well reliability rate in 2015 was 90%, equating to five unplanned failures. In 2021, the reliability rate increased to 98%, equating to one unplanned failure. WRM's goal is to achieve 98% reliability or better in future years.

Comment

Identifier
Risk 3

Where in the value chain does the risk driver occur?
Direct operations

Risk type & Primary climate-related risk driver

Chronic physical	Other, please specify (Changes in precipitation patterns and extreme variability in weather patterns)

Primary potential financial impact
Other, please specify (Increased capital expenditures and operating costs.)

Climate risk type mapped to traditional financial services industry risk classification
<Not Applicable>

Company-specific description
In 2021, the risk of catastrophic fire event is an example of a risk that has potential financial impact to operating costs. The risk of catastrophic fire event is driven by changes in precipitation patterns and extreme variability in weather patterns which can create the physical conditions leading to drought. The risk was assessed through the ERM process and identified as a level (04) risk (meaning an impact of greater than $25 million) as it relates to financial impact. Catastrophic fire events were identified as an enterprise top risk for the last four years (2017-2021). In Arizona, about half of primary residential and commercial structures are located near the wildland-urban interface. Due to extended drought over the past decade, forests and vegetation have been stressed from the lack of regular and sufficient moisture, compounded by shorter, drier winters and longer, warmer summers. These changes in weather patterns pose a fire risk to the communities we serve. To effectively respond to this risk, we collaborate with key stakeholders to reduce wildland fire risk and create defensible space throughout Arizona. With approximately 5,900 miles of transmission lines and 34,100 miles of distribution lines throughout Arizona, the potential threat to our system from wildfires is very real. APS is focused on wildfires at all times, planning year-round and continually strengthening the system so that customers can feel confident in our ability to serve them power. We use a three-pronged approach to mitigate fire risk. First, we assess site-specific fire risk and develop a model to prioritize resources. Second, we educate and inform the communities we serve about fire mitigation. Third, we implement a proactive program to create defensible space around poles (DSAP) to address vegetation at the base of utility poles. The goal of the DSAP program is to remove combustible material inside a minimum 10-foot radius around equipment poles on a three-year cycle.

Time horizon
Short-term

Likelihood
Likely

Magnitude of impact
High

Are you able to provide a potential financial impact figure?
No, we do not have this figure

Potential financial impact figure (currency)
<Not Applicable>

Potential financial impact figure – minimum (currency)
<Not Applicable>

Potential financial impact figure – maximum (currency)
<Not Applicable>

Explanation of financial impact figure
We cannot provide a financial figure at this time.

Cost of response to risk
20500000

Description of response and explanation of cost calculation
The cost of management is a yearly cost of approximately $20.5 million to support the forestry Business Unit, which is dedicated to management of rights-of-way and helping to harden assets against the threat of forest fires related to changes in physical climate parameters. The management costs are an approximate yearly cost to maintain the personnel in the department and all associated projects. Of the $20.5 million, approximately $18.5 million is for outside services and operations and $2 million is for the management of the department. ($18.5M + $2M = $20.5M) We use a three-pronged approach to mitigate fire risk. First, we assess site-specific fire risk and develop a model to prioritize resources. Second, we educate the communities we serve about fire mitigation. Third, we create defensible space around poles (DSAP); the goal of the DSAP program is to remove combustible material inside a minimum 10-foot radius around equipment poles on a three-year cycle. Fire mitigation efforts recently included development of a dedicated hazard vegetation mitigation program aimed at addressing the increased tree mortality near electric facilities across the state. In addition, our rights-of-way, which are managed for compatible vegetation, are used by firefighters to suppress wildfires across Arizona. The effectiveness of our fire mitigation efforts was evident during the Telegraph Fire in Superior, Arizona, and the Rafael Fire in the Prescott National Forest in 2021. During these events, our crews collaborated with federal, state, and local officials to de-energize power lines and ensure the safety of residents and homes in the affected areas. As a result of the defensible space created in our utility corridor, the fires were prevented from reaching many of our poles and damaging our lines. This greatly improved our ability to quickly restore service after the fires were contained.

Comment
The Company has taken several steps to mitigate the risk of wildfires, including collaborations with state and local agencies and updating the Company's fire mitigation plan.

C2.4

(C2.4) Have you identified any climate-related opportunities with the potential to have a substantive financial or strategic impact on your business?
Yes

C2.4a

(C2.4a) Provide details of opportunities identified with the potential to have a substantive financial or strategic impact on your business.

Identifier
Opp1

Where in the value chain does the opportunity occur?

Direct operations

Opportunity type
Energy source

Primary climate-related opportunity driver
Use of supportive policy incentives

Primary potential financial impact
Reduced indirect (operating) costs

Company-specific description
The energy efficiency standard (EES) set by the Arizona Corporation Commission, requires utilities to achieve cumulative savings equivalent to 22% of 2020 retail sales. APS continued successful implementation of DSM programs in 2021 and continued to stay in compliance with the 22% cumulative savings goal throughout the year. In addition, in the 2021 Demand Side Management (DSM) Plan, the ACC established a goal for APS to achieve annual incremental savings of 334,635 MWh from approved DSM programs in 2021. APS was able to deliver over 95% of this annual savings goal by achieving savings of 319,328 MWh. That is enough energy to power more than 26,352 typical Arizona households for an entire year. Since 2005, the lifetime energy savings from our energy efficiency programs have avoided approximately $23.7 million metric tons of carbon emissions. To best support customers adversely impacted by the global health and economic crisis spawned by COVID-19, APS proposed additional DSM measures in its 2021 DSM Implementation Plan. The plan was approved by the Arizona Corporation Commission to help: • Provide higher funding for limited-income weatherization projects • Provide increased HVAC incentives • Provide mobile app videoconferencing technology to enable trained professionals to conduct virtual home energy audits to identify energy saving opportunities without the need to enter customer homes •Assist nonprofit organizations and agencies that provide community health and human services • Assist schools, historic facilities and other cultural sites that are important to the quality of life for Arizonans • Assist APS's Trade Allies that provide energy services, as long as they can do the work in a safe manner • Assist local small businesses continue operating through the economic impacts of this pandemic There is a cost to implement DSM programs, but ultimately the savings from DSM potentially reduce our indirect (operating) costs by helping to reduce demand on our fleet. APS offers a comprehensive portfolio of DSM programs to achieve the required EES. The APS DSM portfolio also includes a focus on demand response, load shifting, energy storage and load management programs designed to help flatten system load shapes and shift energy use into the middle of the day during peak solar production when APS's generation mix has the lowest carbon intensity. These programs are essential to us reaching our goal to provide 100% clean, carbon-free electricity by 2050.

Time horizon
Short-term

Likelihood
Virtually certain

Magnitude of impact
High

Are you able to provide a potential financial impact figure?
Yes, a single figure estimate

Potential financial impact figure (currency)
1200000000

Potential financial impact figure – minimum (currency)
<Not Applicable>

Potential financial impact figure – maximum (currency)
<Not Applicable>

Explanation of financial impact figure
Each year APS files a DSM implementation plan with the Arizona Corporation Commission (ACC) that includes detailed information about DSM program goals, estimated participation, energy savings, emissions reductions and proposed budgets. Since program inception, this investment has created almost $1.2 billion of net economic benefits (present value of societal benefits created by avoiding energy generation less the present value of societal costs from installing energy efficient measures) for APS customers. The APS DSM portfolio is measured for cost effectiveness using the Societal Benefits Test. These net benefits are the result of avoided generation capacity, fuel savings and operations and maintenance savings due to APS DSM programs. These net benefits do not include any monetary value for the carbon emission savings resulting from programs – these savings are quantified but not monetized. Based on portfolio cost effectiveness results reported to the Arizona Corporation Commission, the APS DSM portfolio has produced over $1.21 billion in net benefits (total benefits minus costs) for APS customers from 2005-2021. Of the $1.21 billion, $476 million in benefits result from implemented residential energy efficiency programs, $770.8 million is in benefits result from implemented business energy efficiency programs, $50.9 million in benefits result from implemented codes and standards and $84 million in costs result from additional DSM initiatives (tribal communities, measurement and evaluation, and performance incentives). Energy efficiency measures implemented by our customers in 2021, totalling 319,328 MWh annual savings, contributed $35.6 million net benefits to the over $1.2 billion in net benefits from 2005-2020. ($476M+$770.8M+$50.9M)-$84M = $1.2B)

Cost to realize opportunity
750600000

Strategy to realize opportunity and explanation of cost calculation
During the time period from 2005 through 2021, APS spent a total of over $750.6 million in customer-focused demand side management (DSM) programs and expenses. This investment has created over $1.2 billion of net economic benefits (present value of societal benefits created by avoiding energy generation less the present value of societal costs from installing energy efficient measures) for APS customers. Of the $750.6 million in program to date expenses, $321 million was for the implementation of residential energy efficiency program, $280.6 million for the implementation of non-residential programs, $36.6 million for other initiatives including Energy Storage and Load Management programs, Managed EV Charging Pilot, Energy and Demand Education, tribal communities and codes and standards, $30.4 million for measurement, evaluation, and research, and $55.4 million for performance incentives and $26.6 million for Demand Response programs. ($321M + $280.6M + $36.6M + $30.4M + $55.4M + $26.6M= $750.6M) Due to the COVID-19 pandemic in 2020 and 2021, many APS customers suffered financially from loss of jobs and/or increases in medical expenses. Because of the adverse economic impacts of the pandemic, a number of Arizona households have identified ways to reduce costs, including energy costs. To best support impacted customers, APS proposed additional DSM measures in its 2021 DSM Implementation Plan, including developing a mobile app videoconferencing technology to enable trained professionals to conduct virtual home energy audits to identify energy saving opportunities without the need to enter customer homes. Based on portfolio cost effectiveness results reported to the Arizona Corporation Commission, the total APS DSM portfolio produced over $35.6 million in net benefits (total societal benefits minus societal costs) for APS customers in 2021. Each year APS files an annual DSM implementation plan with the Arizona Corporation Commission for approval that includes detailed information about DSM program goals, estimated participation, energy savings, emissions reductions and proposed budgets.

Comment

Identifier
Opp2

Where in the value chain does the opportunity occur?
Direct operations

Opportunity type
Energy source

Primary climate-related opportunity driver
Use of lower-emission sources of energy

Primary potential financial impact
Increased diversification of financial assets

Company-specific description
In January 2020, APS announced its Clean Energy Commitment, an aspirational goal to provide 100% clean, carbon-free electricity by 2050 with a nearer-term 2030 target of achieving a resource mix that is 65% clean energy, with 45% of our generation portfolio coming from renewable energy. The financial impacts of increasing renewables as part of our resource mix reduce our exposure to future fossil fuel price increases, as we do not need to purchase additional fossil fuels. The Arizona Corporate Commission (ACC) has adopted a renewable energy standard (RES), in which electric utilities under its jurisdiction must supply an increasing percentage of their retail electric energy sales from eligible renewable resources, including solar, wind, biomass, biogas and geothermal technologies. In 2021, the Company's total RES resources were 2,695,395 MWh, which is 9.3% of APS's total 2021 retail sales. The RES rules further mandate that 30% of an affected utility's total requirement be fulfilled with energy produced from distributed energy (DE) sources, one-half of which may come from residential applications and the remaining one-half from non-residential, non-utility applications. APS requested and received a waiver from the residential distributed generation (DG) requirement as APS did not meet the residential DE requirement. However, APS did meet the non-DE RES compliance requirement in 2021. Renewable energy resources installed in APS's service territory produced 4,366,408 MWh in 2021, which includes energy from rooftop solar installations for which an incentive was not provided. The renewable energy standard increases annually until reaching 15% in 2025. This regulatory driver is having a large impact on APS's generation mix.

Time horizon
Short-term

Likelihood
Virtually certain

Magnitude of impact
High

Are you able to provide a potential financial impact figure?
Yes, an estimated range

Potential financial impact figure (currency)
<Not Applicable>

Potential financial impact figure – minimum (currency)
15292000

Potential financial impact figure – maximum (currency)
21397000

Explanation of financial impact figure
$15,292 million - $21,397 million nominal ($7,270 million - $9,706 million net present value). Potential financial impacts reflect assumptions and models included in APS's 2020 Integrated Resource Plan for 2020-2035. The above financial impacts include the ongoing capital and operation and maintenance costs for owned renewables, purchased power agreement payments, integration costs and future liabilities on incentivized rooftop solar. The financial impacts of increasing renewables as part of our resource mix reduce our exposure to future fossil fuel price increases as we do not need to purchase additional fossil fuels.

Cost to realize opportunity
384800000

Strategy to realize opportunity and explanation of cost calculation
In July of 2020, APS submitted a renewable energy standard (RES) implementation plan to the Arizona Corporation Commission (ACC) requesting funding approval for existing program commitments and deployment of previously authorized programs. The requested budget for APS's 2021 plan consists of funding for previously authorized programs, including legacy production-based incentive (PBI) subsidy payments, purchased power agreement (PPA) and revenue requirement costs, educational outreach, and administration of prior initiatives currently being implemented. APS expects the total base budget for PBI, other distributed generation (DG) legacy programs and PPA projects in 2021 to be $84.7 million, and the total request for the 2021-2025 plan years to be $384.8 million, not including any funding offsets. This equates to a total RES budget of $84.7 million for 2021, $85.2 million for 2022, $72.4 million for 2023, $71.1 million for 2024 and $71.3 million for 2025. One example within the RES implementation plan is renewable generation (RG) resources, which are larger-scale renewable energy resources that serve the energy demand of all APS customers. These resources are part of the Company's energy portfolio and are applied to APS's overall RES requirements. APS's targeted RG resources for 2021 are 2,579 GWh. ($84.7M +$85.2M +$72.4 +$71.1M +$71.3M = $384.8M) In 2021, the Company's total RES resources were 2,695,395 megawatt-hours (MWh), which is 9.3% of APS's total 2021 retail sales. This includes energy from rooftop solar installations for which an incentive was provided. However, total renewable energy resources installed in APS's service territory produced 4,366,408 MWh in 2021. This is equivalent to nearly 15% of APS's 2021 retail sales. With over 17,000 installations in 2021, APS continued to see robust levels of rooftop solar being installed in APS's service territory without incentives. The above DG projection does not include Renewable Energy Credits associated with non-incentivized installations.

Comment

Identifier
Opp3

Where in the value chain does the opportunity occur?
Direct operations

Opportunity type
Energy source

Primary climate-related opportunity driver
Use of lower-emission sources of energy

Primary potential financial impact
Reduced indirect (operating) costs

Company-specific description

APS is deploying a wide array of new distributed energy resource (DER) technologies to provide clean, reliable, affordable energy to its customers. These include battery storage, thermal storage, load management, electric vehicles and other beneficial electrification technologies that have the potential to increase the value of intermittent generation resources as well as increase grid reliability and stability, while also reducing carbon emissions. Besides simply storing and dispatching power, these technologies have the ability to provide other ancillary services such as voltage regulation, frequency response, and support for intermittent renewable resources. DERs can also help defer investments in more traditional transmission and distribution infrastructure, allowing system reliability to be maintained at lower overall cost. With respect to renewable resources, energy storage makes these intermittent resources more useful for the utility system by better aligning the availability of power with the system's peak energy demand. In 2021, we expanded certain Rewards DER storage programs. Launched in 2018 and 2019, these industry-leading and award-winning programs incentivize customers to adopt advanced technologies in their homes to help consume electricity at midday when solar energy is plentiful and to conserve power in the late afternoon and early evening when it is in greatest demand and thus costs more. The APS Rewards initiative goes beyond using traditional batteries and helps to harness the use of thermal storage through smart water heaters and thermostats. Through our Cool Rewards program, focused on connected residential smart thermostats for demand response with pre-cooling, more than 57,000 residential smart thermostats were enrolled, as of the end of January 2022. Customers benefit from incentives, discounts and energy-savings options for voluntarily conserving energy. The program has a capability of shedding more than 80 megawatts of energy from APS's grid. This shift is just one of the strategies and innovative solutions for our customers to collaborate with us to reduce carbon emissions to meet our clean energy goals. Through Storage Rewards, we focused on residential and commercial battery systems installed on specific feeders and we have 35 residential sites for batteries in 2021. Through the Reserve Rewards program, 222 grid-interactive water heaters were installed in homes on specific feeders in 2021.

Time horizon
Short-term

Likelihood
Very likely

Magnitude of impact
Medium-high

Are you able to provide a potential financial impact figure?
Yes, an estimated range

Potential financial impact figure (currency)
<Not Applicable>

Potential financial impact figure – minimum (currency)
14000

Potential financial impact figure – maximum (currency)
21000

Explanation of financial impact figure
It is still too early to know the full financial impact these systems may provide to our operations, but we expect that they will be providing direct savings to our customers. Most of the proposed projects are research and development projects to determine their ability to provide voltage regulations, power factor improvements, load balancing and peak shaving. One of the objectives of the energy storage and load management program is to develop better information about the costs and benefits of these emerging distributed energy management technologies. Some of these technologies, such as residential battery storage, are not currently cost effective, but this project provides valuable learnings about how to connect to and manage distributed storage technologies while also offering participant benefits. Ongoing savings on average range $400-$600 per year on energy costs on peak demand. There was a total of 35 participants in the residential storage battery storage program in 2021 for a total of approximately $14,000 - $21,000 potential savings for 2021. ($400*35=$14,000, $600*35=$21,000)

Cost to realize opportunity
5700000

Strategy to realize opportunity and explanation of cost calculation
A total of $9,571,935, was spent for the implementation of the Rewards program in 2021. This includes $5,758,250 for rebates and incentives, $3,600,745 for program implementation, $27,794 for program marketing and $184,459 for planning and administration. ($5,758,250 + $3,600,745 + $27,794 + $184,459 = $9,571,935) The program includes emerging technologies for managing system load shapes and helping customers shift energy use to lower cost off-peak hours including battery storage, connected water heaters and demand response with smart thermostats. It is being marketed to APS customers as the Rewards program, which includes Storage Rewards (battery storage), Reserve Rewards (connected water heaters) and Cool Rewards (smart thermostats). The programs, resulting in 546 annual gross MWh saving and 67.8 MW peak demand savings. For the Storage Rewards program, 35 residential scale batteries were installed and operating during this reporting period. For the Reserve Rewards program, a total of 222 connected water heaters were installed and operating during the reporting period.

Comment

C3. Business Strategy

C3.1

(C3.1) Does your organization's strategy include a transition plan that aligns with a 1.5°C world?

Row 1

Transition plan

No, but our strategy has been influenced by climate-related risks and opportunities, and we are developing a transition plan within two years

Publicly available transition plan

<Not Applicable>

Mechanism by which feedback is collected from shareholders on your transition plan

<Not Applicable>

Description of feedback mechanism

<Not Applicable>

Frequency of feedback collection

<Not Applicable>

Attach any relevant documents which detail your transition plan (optional)

<Not Applicable>

Explain why your organization does not have a transition plan that aligns with a 1.5°C world and any plans to develop one in the future

Our clean energy commitment is to provide 100% carbon free electricity by 2050 with a nearer-term 2030 target of achieving a resource mix that is 65% clean energy, with 45% of our generation portfolio coming from renewable energy, and ending all coal fired generation by 2031. Our 2050 target is consistent with the Intergovernmental Panel on Climate Change's recommended timeframe for limiting global warming this century to 1.5°C above pre–industrial levels (SR1.5). We will continue to monitor climate science developments to stay aligned with new research and recommendations. While APS has key performance indicators tracking our progress as well as initiatives and strategies to achieve our commitment, we are working on developing a public facing-climate transition plan that aligns with a 1.5C world and which has a feedback mechanism in place for stakeholders. In addition, our Integrated Resources Plan, which is available to the public, does have our transition plan through 2035.

Explain why climate-related risks and opportunities have not influenced your strategy

<Not Applicable>

C3.2

(C3.2) Does your organization use climate-related scenario analysis to inform its strategy?

	Use of climate-related scenario analysis to inform strategy	Primary reason why your organization does not use climate-related scenario analysis to inform its strategy	Explain why your organization does not use climate-related scenario analysis to inform its strategy and any plans to use it in the future
Row 1	No, but we anticipate using qualitative and/or quantitative analysis in the next two years	Other, please specify (Although important and supported by leadership, the company has not yet completed a climate-related scenario analysis primarily due to outcomes associated with pending climate legislation and timing with our next integrated resource plan.)	We use a variety of methods to inform our strategies to achieve our clean energy commitment including both qualitative and quantitative analysis, including an analysis of risks and opportunities, KPIs, compensation incentives, benchmarking, investment in innovation. Additionally, we have prioritized an initiative to begin the climate scenario planning process in the next two years. We take our clean energy commitment seriously and have a variety of business frameworks in place to ensure we are taking the short, medium, and long-term steps to achieve our commitment. We believe climate scenario planning is an important tool and we are now positioned to embark on this process.

C3.3

(C3.3) Describe where and how climate-related risks and opportunities have influenced your strategy.

	Have climate-related risks and opportunities influenced your strategy in this area?	Description of influence
Products and services	Yes	A climate related risk and opportunity the Company has addressed in 2021 is our strategic decision to continue the implementation of a new online marketplace to reach customers digitally and provide access to educational information, APS rebates and special discounts on energy efficient devices and appliances. This strategy was influenced by APS's plan to mitigate climate-related technology risks by providing customers with the necessary resources to understand and manage their own energy and peak demand. This strategy is anticipated to cover both short- and medium-term time horizon (0-5 years). Throughout the year we promoted certain residential participation in our demand-side management programs in the marketplace. For instance, APS offered energy efficient LED light bulb kits to customers at no cost and saw significant participation. As part of marketplace promotions, APS offered zero cost Nest and Ecobee thermostats through Marketplace for customers who agreed to have their thermostat pre enrolled to participate in one season of the Cool Rewards demand response program. Customers were able to receive their energy efficiency thermostat rebate and Cool Rewards participation incentive along with manufacturer discount at checkout resulting in a net zero cost (taxes and shipping were paid by the customer).
Supply chain and/or value chain	Yes	A climate related risk and opportunity the Company has addressed in our value chain is the adoption of a fleet vehicle standard that will impact our procurement strategy and value chain. We have continued on a path to transitioning 30% of our light-duty vehicles and equipment (comprised of forklifts, all-terrain vehicles, golf carts and light-duty passenger vehicles) to electric by 2025 with an aspirational goal of achieving a 100% clean, carbon-free fleet by 2050. As of the end of 2021, we have electrified 13% of our light-duty vehicles and equipment and have placed an order for our first round of fully electric light-duty pickup trucks. Our strategic decision to adopt a fleet vehicle standard was influenced by the climate-related risk of emerging regulation surrounding GHG emissions reductions. The standard will reduce our Scope 1 emissions and is anticipated to span both medium- and long-term time horizons (1-30 years). Our transportation fleet's conversion to more fuel-efficient vehicles and electrification continues through market research and updates to our electrification strategy. We are monitoring medium and heavy-duty options and will adopt them once there is more commercial availability. Through this ongoing conversion and by using our fleet more efficiently, we are working to reduce carbon emissions and operating costs.
Investment in R&D	Yes	Electric vehicle (EV) adoption in Arizona represents a climate related opportunity. A substantial strategic decision to invest in EV adoption was influenced by the climate-related opportunity to implement the use of lower-emission sources of energy. APS is planning to continue to expand and develop this technology across an anticipated medium and long-term time horizons (1-30 years). The transportation sector represents a significant emissions source, and the electrification of that economic sector can help achieve overall air quality goals and our goal of providing 100% clean, carbon free energy by 2050. We launched an innovative pilot program encouraging electric vehicle (EV) adoption by providing charging stations throughout Arizona, where customers would install and own EV charging equipment located at various businesses, government agencies, non-profits and multifamily communities within the Company's service territory. Through the program, APS is gaining valuable knowledge to better understand the needs of Arizona with regards to the electrification of the transportation sector. At the end of 2021, more than 100 sites have been energized since program inception with over 60 sites and 250 plugs energized in 2021. The Take Charge AZ program also includes a research study that will look at EV growth and load impacts specific to Arizona. As of July 2019, APS has disclosed an investment of $239,000 in the program. In 2021, spending has significantly increased as the program continues to be developed and expanded.
Operations	Yes	A climate related risk and opportunity for our operations is investment in capital in clean generation. A substantial strategic decision was to invest in capital in clean generation that was influenced by the climate-related risk of emerging regulations for carbon reduction. Our planned investments and clean energy expenditures are anticipated to span short medium- and long-term time horizons (1-30 years). A key driver of the Company's strategic plan is to take steps to reduce carbon emissions with a long-term goal of providing 100% clean, carbon-free electricity by 2050 through the Company's clean energy commitment. This goal includes a nearer-term 2030 target of achieving a resource mix that is 65% clean energy, with 45%of our generation portfolio coming from renewable energy. We also will end all coal-fired generation by 2031, seven years sooner than previously projected. The commitment is informed by consultations with Arizona universities and non-governmental organization experts. This will impact the operations of the Company as it adopts resources and technologies to achieve this plan. The Company projects it will spend over $1.48 billion for the period 2021-2024 on clean generation and environmental capital expenditures. In addition, to support the Human Resources Committee's (HRC) request to develop a carbon reduction metric within to the Long-Term Incentive Plan, the CEO asked the Sustainability department to develop some options. In 2021, the Director lead a team from across the business to develop and evaluate options and make a recommendation to executive management, including the CSO, SVP, CFO, CEO, and other officers. In 2021, our CEO recommended, and the HRC Board subsequently adopted, a new Clean Megawatts (MW) Installed metric that ties a portion of executive long-term incentive compensation to progress towards our Clean Energy Commitment interim milestones. (Our interim milestones are to achieve a 65% clean resource mix by 2030, 45% of our generation portfolio coming which comes from renewable energy.) The new Clean MW Installed metric establishes targets and measures performance related to the installation of clean, renewable or other carbon-free resources over a rolling three-year average, commencing in 2022. This supports an overall reduction in water use as increased wind and PV solar generation will use minimal water.

C3.4

(C3.4) Describe where and how climate-related risks and opportunities have influenced your financial planning.

	Financial planning elements that have been influenced	Description of influence
Row 1	Capital allocation	APS currently allocates its capital based on clean generation and other environmental expenditures. These expenditures are influenced by climate-related technology opportunities. We have planned environmental expenditures that span the short (0-1 years), medium (1-5 years), and long-term (5-30 years) time horizons, and are constantly monitoring the status of related environmental matters. Capital expenditures are comprised of various additions and improvements to APS's clean generation resources, including nuclear plants, renewables and energy storage systems. Examples of the types of projects included in the forecast of generation capital expenditures are additions of renewables and energy storage and upgrades and capital replacements of our various nuclear and fossil power plant equipment, such as turbines, boilers and environmental equipment. We are monitoring the outcome of environmental matters, which could require modification to our planned environmental expenditures. As an example, in 2020, we allocated $136 million in capital investment in clean (nuclear and renewable) generation, $146 million in environmental upgrades and $199 million in traditional (oil, coal, gas) generation. APS currently reports forecasts for these capital allocations from 2021-2022 totalling $4.5 billion.

C4. Targets and performance

C4.1

(C4.1) Did you have an emissions target that was active in the reporting year?

Absolute target

C4.1a

(C4.1a) Provide details of your absolute emissions target(s) and progress made against those targets.

Target reference number

Abs 1

Year target was set
2020

Target coverage
Company-wide

Scope(s)
Scope 1
Scope 2

Scope 2 accounting method
Market-based

Scope 3 category(ies)
<Not Applicable>

Base year
2005

Base year Scope 1 emissions covered by target (metric tons CO2e)
16557441

Base year Scope 2 emissions covered by target (metric tons CO2e)
126614

Base year Scope 3 emissions covered by target (metric tons CO2e)
<Not Applicable>

Total base year emissions covered by target in all selected Scopes (metric tons CO2e)
16684055

Base year Scope 1 emissions covered by target as % of total base year emissions in Scope 1
99.5

Base year Scope 2 emissions covered by target as % of total base year emissions in Scope 2
99.5

Base year Scope 3 emissions covered by target as % of total base year emissions in Scope 3 (in all Scope 3 categories)
<Not Applicable>

Base year emissions covered by target in all selected Scopes as % of total base year emissions in all selected Scopes
99.5

Target year
2032

Targeted reduction from base year (%)
70

Total emissions in target year covered by target in all selected Scopes (metric tons CO2e) [auto-calculated]
5005216.5

Scope 1 emissions in reporting year covered by target (metric tons CO2e)
11329468

Scope 2 emissions in reporting year covered by target (metric tons CO2e)
131917

Scope 3 emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Total emissions in reporting year covered by target in all selected scopes (metric tons CO2e)
11461385

% of target achieved relative to base year [auto-calculated]
44.7190874332238

Target status in reporting year
Underway

Is this a science-based target?
No, and we do not anticipate setting one in the next 2 years

Target ambition
<Not Applicable>

Please explain target coverage and identify any exclusions
In January 2020, the Company set the boldest clean-energy goal of all Arizona electric companies, as well as one of the most ambitious in the country: to deliver 100% clean, carbon-free electricity by 2050. This goal includes a nearer-term 2030 target of 65% clean energy, with 45% of our generation portfolio coming from renewable energy. We also will cease reliance on coal-fired generation by 2031. The commitment is informed by consultations with Arizona universities and non-governmental organization experts. Their input is grounded in current, globally recognized climate science and provides a greater understanding of the impacts of our changing climate across the state. Our 2050 target is consistent with the Intergovernmental Panel on Climate Change's recommended timeframe for limiting global warming this century to 1.5°C above pre-industrial levels. We will continue to monitor climate science developments to stay aligned with new research and recommendations. The target year of 2032 considers the first two milestones of our Clean Energy Commitment: with a nearer-term 2030 target of achieving a resource mix that is 65% clean energy, with 45% of our generation portfolio coming from renewable energy and ceasing reliance on coal- fired generation. Our Integrated Resource Plan (IRP) includes an Action Plan that lays out the near-term actions we must take to progress rapidly to our 2030 interim target and ultimate 2050 goal. APS developed three portfolios for the 2020 IRP that meet both our reliability and clean energy needs over the Planning Period. This target aligns with Path 2 - Shift, which build on our bridge plan but also moves APS away from natural gas more quickly be excluding any new natural gas generation.

Plan for achieving target, and progress made to the end of the reporting year
During 2021, the share of APS's energy supply from clean resources was 50%, which includes energy from nuclear, renewables and demand side management (DSM). We are on track to reach our goal of 65% clean resource mix by 2030. In addition, by 2030, 45% of our generation portfolio will be from renewable energy. Renewable energy is measured in accordance with the Arizona Corporation Commission's Renewable Energy Standard as a percentage of retail sales. Since our initial announcement in 2020, we've procured nearly 1,400 megawatts of clean energy and storage – all of which are expected to be in service for APS customers no later than 2024. All 1,400 megawatts were procured through competitive solicitations, ensuring competitive pricing for new resources as we plan to serve our growing economy. Additionally in 2021, to support the Human Resources Committee's request to develop a carbon reduction metric within the Long-Term Incentive Plan, the CEO asked the Sustainability department to develop some options. In 2021, the Director lead a cross-functional team to develop and evaluate options and make a recommendation to executive management, including the CSO, SVP, CFO, CEO, and other officers. In 2021, our CEO recommended, and the HRC subsequently adopted, a new Clean Megawatts (MW) Installed metric that ties a portion of executive long-term incentive compensation to progress towards our Clean Energy Commitment interim milestones. (Our interim milestones are to achieve a 65% clean resource mix by 2030, 45% of our generation portfolio coming from renewable energy.) The new Clean MW Installed metric establishes targets and measures performance related to the installation of clean, renewable or other carbon-free resources over a rolling three-year average, commencing in 2022. Achieving 100% clean, carbon-free energy will require continued advances in energy technology. Hydrogen is a promising clean energy resource and our new Hydrogen Energy Initiatives project allows us to explore opportunities and investments in this sector. We're also partnering with the Electric Power Research Institute and other utilities on the Low-Carbon Resources Initiative, which focuses on accelerating the development and demonstration of low- and zero-carbon energy technologies.

List the emissions reduction initiatives which contributed most to achieving this target
<Not Applicable>

Target reference number
Abs 2

Year target was set
2020

Target coverage
Company-wide

Scope(s)
Scope 1
Scope 2

Scope 2 accounting method
Please select

Scope 3 category(ies)
<Not Applicable>

Base year
2005

Base year Scope 1 emissions covered by target (metric tons CO2e)
16557441

Base year Scope 2 emissions covered by target (metric tons CO2e)
126614

Base year Scope 3 emissions covered by target (metric tons CO2e)
<Not Applicable>

Total base year emissions covered by target in all selected Scopes (metric tons CO2e)
16684055

Base year Scope 1 emissions covered by target as % of total base year emissions in Scope 1
99.5

Base year Scope 2 emissions covered by target as % of total base year emissions in Scope 2
99.5

Base year Scope 3 emissions covered by target as % of total base year emissions in Scope 3 (in all Scope 3 categories)
<Not Applicable>

Base year emissions covered by target in all selected Scopes as % of total base year emissions in all selected Scopes
99.5

Target year
2050

Targeted reduction from base year (%)
100

Total emissions in target year covered by target in all selected Scopes (metric tons CO2e) [auto-calculated]
0

Scope 1 emissions in reporting year covered by target (metric tons CO2e)
11329468

Scope 2 emissions in reporting year covered by target (metric tons CO2e)
131917

Scope 3 emissions in reporting year covered by target (metric tons CO2e)
<Not Applicable>

Total emissions in reporting year covered by target in all selected scopes (metric tons CO2e)
11461385

% of target achieved relative to base year [auto-calculated]
31.3033612032566

Target status in reporting year
Underway

Is this a science-based target?
No, and we do not anticipate setting one in the next 2 years

Target ambition
<Not Applicable>

Please explain target coverage and identify any exclusions
In January 2020, the Company set the boldest clean-energy goal of all Arizona electric companies, as well as one of the most ambitious in the country, to deliver 100% clean, carbon-free electricity by 2050. This goal includes a nearer-term 2030 target of 65% clean energy, with 45% of our generation portfolio coming from renewable energy. We also will cease reliance on coal-fired generation by 2031. The commitment is informed by consultations with Arizona universities and non-governmental organization experts. Their input is grounded in current, globally recognized climate science and provides a greater understanding of the impacts of our changing climate across the state. Our 2050 target is consistent with the Intergovernmental Panel on Climate Change's recommended timeframe for limiting global warming this century to 1.5°C above pre-industrial levels. We will continue to monitor climate science developments to stay aligned with new research and recommendations.

Plan for achieving target, and progress made to the end of the reporting year
During 2021, the share of APS's energy supply from clean resources was 50%, which includes energy from nuclear, renewables and demand side management (DSM). We are on track to reach our goal of 65% clean resource mix by 2030. In addition, by 2030, 45% of our generation portfolio will be from renewable energy. Renewable energy is measured in accordance with the Arizona Corporation Commission's Renewable Energy Standard as a percentage of retail sales. Since our initial announcement in 2020, we've procured nearly 1,400 megawatts of clean energy and storage – all of which are expected to be in service for APS customers no later than 2024. All 1,400 megawatts were procured through competitive solicitations, ensuring competitive pricing for new resources as we plan to serve our growing economy. Achieving 100% clean, carbon-free energy will require continued advances in energy technology. Hydrogen is a promising clean energy resource, and our new Hydrogen Energy Initiatives project allows us to explore opportunities and investments in this sector. We're also partnering with the Electric Power Research Institute and other utilities on the Low-Carbon Resources Initiative, which focuses on accelerating the development and demonstration of low- and zero-carbon energy technologies.

List the emissions reduction initiatives which contributed most to achieving this target
<Not Applicable>

C4.2

(C4.2) Did you have any other climate-related targets that were active in the reporting year?
Target(s) to increase low-carbon energy consumption or production
Net-zero target(s)

C4.2a

(C4.2a) Provide details of your target(s) to increase low-carbon energy consumption or production.

Target reference number
Low 1

Year target was set
2007

Target coverage
Company-wide

Target type: energy carrier
Electricity

Target type: activity
Production

Target type: energy source
Renewable energy source(s) only

Base year
2007

Consumption or production of selected energy carrier in base year (MWh)
324094

% share of low-carbon or renewable energy in base year
1.1

Target year
2025

% share of low-carbon or renewable energy in target year
15

% share of low-carbon or renewable energy in reporting year
9.3

% of target achieved relative to base year [auto-calculated]
58.9928057553957

Target status in reporting year
Underway

Is this target part of an emissions target?
Yes, this target is integral to meeting our renewable energy targets as laid out in our Clean Energy Commitment. In January 2020, APS announced it Clean Energy Commitment. By 2050, APS will provide 100% clean, carbon-free and affordable electricity to customers. The Clean Energy Commitment includes a 2030 target of achieving a resource mix that is 65% clean energy, with 45% of our generation portfolio coming from renewable energy. This 2030 target will serve as a critical checkpoint for the company's resource planning, investment strategy, and customer affordability efforts as APS moves toward our commitment. APS's clean energy goals build on the company's history of promoting and integrating renewables, energy efficiency, battery storage, and carbon-free generation. Achieving these aggressive goals will require a combination of the right technologies, collaborative partnerships and a supportive policy environment that understands that flexibility is critical to balancing the building of clean energy generation, while maintaining affordability and reliability for our customers. As APS pursues it Clean Energy Commitment, the company will continue to install resources that allow it to comply with the Renewable Energy Standard and Tariff Rules.

Is this target part of an overarching initiative?
Other, please specify (Our commitment to 100% clean, carbon-free energy by 2050.)

Please explain target coverage and identify any exclusions
The Arizona Corporation Commission requires, through the Renewable Energy Standard and Tariff Rules (RES Rules), that 11.0% of the utility's 2021 retail kilowatt-hour sales come from eligible renewable energy resources. In 2021, the Company's total RES resources were 2,695,395 megawatt-hour, which is 9.3% of APS's total 2021 retail sales. This includes energy from rooftop solar installations for which an incentive was provided. The RES Rules further mandate that 30% of that 11% be fulfilled be fulfilled with energy produced from Distributed Energy) sources, one-half of which may come from residential applications and the remaining one-half from non-residential, non-utility applications. The RES Rules also mandates that 70% of the 11% of the utility's 2021 retail sales be fulfilled with energy produced from renewable generation resources. APS defines Renewable Generation as renewable resources interconnected on the utility side of the meter. Renewable Generation resources are grid-scale projects and apply to the RES Rules total production requirement.

Plan for achieving target, and progress made to the end of the reporting year
In 2021, the Company's total Renewable Energy Standard resources were 2,695,395 megawatt-hours (MWh), which is 9.3% of APS's total 2021 retail sales. This includes energy from rooftop solar installations for which an incentive was provided. However, total energy resources installed in APS service territory produced 4,366,408 MWH in 2021. This is equivalent to nearly 15% of APS's 2021 retail sales and puts us on track to meet our 2030 target of 45% of APS's generation portfolio coming from renewable energy. With over 17,000 installations in 2021, APS continued to see robust level of rooftop solar being installed in APS's service territory without an incentive.

List the actions which contributed most to achieving this target
<Not Applicable>

C4.2c

(C4.2c) Provide details of your net-zero target(s).

Target reference number
NZ1

Target coverage
Company-wide

Absolute/intensity emission target(s) linked to this net-zero target
Abs1
Abs2

Target year for achieving net zero
2050

Is this a science-based target?
No, and we do not anticipate setting one in the next 2 years

Please explain target coverage and identify any exclusions
Carbon-free energy means that no carbon is emitted to the atmosphere, which is going above and beyond net zero. In January 2020, the Company set the boldest clean-energy goal of all Arizona electric companies, as well as one of the most ambitious in the country, to reach 100% clean, carbon-free electricity by 2050. This goal includes a nearer-term 2030 target of 65% clean energy, with 45% of our generation portfolio coming from renewable energy. We also will cease reliance on coal-fired generation by 2031. The commitment is informed by consultations with Arizona universities and non-governmental organization experts. Their input is grounded in current, globally recognized climate science and provides a greater understanding of the impacts of our changing climate across the state. Our 2050 target is consistent with the Intergovernmental Panel on Climate Change's recommended timeframe for limiting global warming this century to 1.5°C above pre-industrial levels. We will continue to monitor climate science developments to stay aligned with new research and recommendations.

Do you intend to neutralize any unabated emissions with permanent carbon removals at the target year?
Unsure

Planned milestones and/or near-term investments for neutralization at target year
<Not Applicable>

Planned actions to mitigate emissions beyond your value chain (optional)

C4.3

(C4.3) Did you have emissions reduction initiatives that were active within the reporting year? Note that this can include those in the planning and/or implementation phases.
Yes

C4.3a

(C4.3a) Identify the total number of initiatives at each stage of development, and for those in the implementation stages, the estimated CO2e savings.

	Number of initiatives	Total estimated annual CO2e savings in metric tonnes CO2e (only for rows marked *)
Under investigation	10	0
To be implemented*	7	1065000
Implementation commenced*	4	450000
Implemented*	2	625
Not to be implemented	0	0

C4.3b

(C4.3b) Provide details on the initiatives implemented in the reporting year in the table below.

Initiative category & Initiative type

Energy efficiency in buildings	Other, please specify (Duct work located in the conditioned envelope of new home construction)

Estimated annual CO2e savings (metric tonnes CO2e)
270

Scope(s) or Scope 3 category(ies) where emissions savings occur
Scope 1

Voluntary/Mandatory
Mandatory

Annual monetary savings (unit currency – as specified in C0.4)
95840

Investment required (unit currency – as specified in C0.4)
327474

Payback period
1-3 years

Estimated lifetime of the initiative
16-20 years

Comment
The residential new home construction program promotes high-efficiency construction practices for new residential homes. It offers incentives to builders that meet the program's energy efficiency requirements. This program also serves as the conduit to encourage the adoption and installation of technologies that deliver energy, carbon and demand savings with unique ability to shift every use for additional customer and grid benefits. This year the program encouraged builders to construct homes with the duct work located in the conditioned envelope of the home, to deliver savings and benefits, and to add electric vehicle prewired circuits in each home to encourage homebuyers to adopt and purchase zero emission vehicles. In 2021, APS paid builders incentives for 1,198 ducts in conditioned spaces and 169 EV pre-wires.

Initiative category & Initiative type

Energy efficiency in buildings	Heating, Ventilation and Air Conditioning (HVAC)

Estimated annual CO2e savings (metric tonnes CO2e)
356

Scope(s) or Scope 3 category(ies) where emissions savings occur
Scope 1

Voluntary/Mandatory
Mandatory

Annual monetary savings (unit currency – as specified in C0.4)
409

Investment required (unit currency – as specified in C0.4)
140480

Payback period
1-3 years

Estimated lifetime of the initiative
11-15 years

Comment
The Advanced Rooftop Controls pilot (ARC) offers K-12 Schools and qualifying Non-profit customers incentives for improving the efficiency of their HVAC system by installing qualifying equipment of advanced rooftop control with VSD, and an outdoor air economizer and energy management system, which are installed in conjunction with the VSD.

C4.3c

(C4.3c) What methods do you use to drive investment in emissions reduction activities?

Method	Comment
Compliance with regulatory requirements/standards	APS uses an integrated planning process to link our business strategy with resource planning. Benchmarking and continuous improvement are valued by the executive team and employees ensuring that the process keep APS focused on key objectives and will ultimately help them deliver reliable and affordable power to Arizona. The Arizona Corporation Commission (ACC) also has an electric Energy Efficiency Standards (EES). Under the EES, Arizona's public utilities under the ACC's jurisdiction are required to achieve cumulative annual energy savings of at least 22% of retail sales in 2019 - measured in kWh - by 2020. APS has been able to achieve compliance with the 22% goal. APS continues to stay in compliance with the 22% cumulative savings goal. In addition, in the 2021 Demand Side Management Plan the ACC established a goal for APS to achieve annual incremental savings of 334,635 MWhs from approved DSM programs in 2021. The ACC has adopted a Renewable Energy Standard (RES), in which electric utilities under its jurisdiction must supply an increasing percentage of their retail electric energy sales from eligible renewable resources, including solar, wind, biomass, biogas and geothermal technologies. The renewable energy standard increases annually until reaching 15% in 2025. This regulatory driver is having a large impact on APS's generation mix.

C4.5

(C4.5) Do you classify any of your existing goods and/or services as low-carbon products?

Yes

C4.5a

(C4.5a) Provide details of your products and/or services that you classify as low-carbon products.

Level of aggregation
Group of products or services

Taxonomy used to classify product(s) or service(s) as low-carbon
Other, please specify (Arizona Energy Efficiency Standard and all programs use ENERGY STAR products)

Type of product(s) or service(s)

Other	Other, please specify (Energy Efficiency programs for customers, residential and commercial)

Description of product(s) or service(s)
APS offers customers a comprehensive portfolio of energy efficiency options.

Have you estimated the avoided emissions of this low-carbon product(s) or service(s)
No

Methodology used to calculate avoided emissions
<Not Applicable>

Life cycle stage(s) covered for the low-carbon product(s) or services(s)
<Not Applicable>

Functional unit used
<Not Applicable>

Reference product/service or baseline scenario used
<Not Applicable>

Life cycle stage(s) covered for the reference product/service or baseline scenario
<Not Applicable>

Estimated avoided emissions (metric tons CO2e per functional unit) compared to reference product/service or baseline scenario
<Not Applicable>

Explain your calculation of avoided emissions, including any assumptions
<Not Applicable>

Revenue generated from low-carbon product(s) or service(s) as % of total revenue in the reporting year
0.37

Level of aggregation
Product or service

Taxonomy used to classify product(s) or service(s) as low-carbon
No taxonomy used to classify product(s) or service(s) as low carbon

Type of product(s) or service(s)

Power	Solar PV

Description of product(s) or service(s)
APS Green Choice program allows customers to purchase up to 100% of their power from renewable energy from Arizona and New Mexico.

Have you estimated the avoided emissions of this low-carbon product(s) or service(s)
No

Methodology used to calculate avoided emissions
<Not Applicable>

Life cycle stage(s) covered for the low-carbon product(s) or services(s)
<Not Applicable>

Functional unit used
<Not Applicable>

Reference product/service or baseline scenario used
<Not Applicable>

Life cycle stage(s) covered for the reference product/service or baseline scenario
<Not Applicable>

Estimated avoided emissions (metric tons CO2e per functional unit) compared to reference product/service or baseline scenario
<Not Applicable>

Explain your calculation of avoided emissions, including any assumptions
<Not Applicable>

Revenue generated from low-carbon product(s) or service(s) as % of total revenue in the reporting year
0.02

C-EU4.6

(C-EU4.6) Describe your organization's efforts to reduce methane emissions from your activities.

The natural gas consumed by APS is used as a fuel for our fleet of 37 natural gas-fired combustion turbines in Arizona and for start-up operations in certain coal units at our Four Corners and Cholla Power Plants in New Mexico and Arizona respectively. Due to the large amount of natural gas used by the facilities, APS works to properly manage and prevent inadvertent releases of methane to assure plant safety, environmental protection, and fiscal responsibility.

Our main emission reduction efforts regarding methane include ensuring methane leaks do not go undetected by plant personnel. To do so, APS uses third-party companies to conduct methane leak detection surveys on the underground and accessible above – ground natural gas pipelines, valves, and gas conditioning system. Our eight fossil plants all have their own frequency of third-party inspections depending on various requirements: Four Corners Power Plant gets an annual inspection; Cholla Power Plant, Ocotillo Power Plant, Saguaro Power Plant, West Phoenix Power Plant and Yucca Power Plant get semi-annual inspections; Redhawk Power Plant and Sundance Power Plant get quarterly inspections.

The surveys are conducted by a third party. Any leaks identified are tagged and a report is generated. The detected leaks are classified using ASTM B31.8 Appendix G-11 (1983) to determine severity and action criteria. The reports are sent to the Corporate Engineer who creates a service request for each plant in our internal work management system. The plant then schedules the repairs to be completed by maintenance or an outside vendor. The surveys start at the APS gas yards at each plant and cover the underground and accessible above-ground piping up to the unit. The contractor uses methane-specific intrinsically safe detection equipment. In addition, to assure continual safety of personnel and equipment, plant operators monitor and inspect the natural gas supply lines and gas conditioning equipment regularly. Plant operators record any identified methane leaks and issue work orders for plant maintenance to repair leaks as quickly as possible. The daily monitoring by plant personnel and the third-party natural gas detection inspections provides a process for APS to ensure any methane leaks are promptly identified and repaired. In 2021, APS continued to do surveys at the plants during COVID-19 to meet our regulatory requirements and maintain our commitment to our leak detection program. Plant personnel worked with contractors to ensure COVID-19 protocols were implemented for contractors to enter our sites.

Because large Grade 1 or 2 methane leaks at the sites are rare, a specific methane reduction target has not been established. However, the methane identification and reduction actions taken by the plant ensures emissions are minimized to maintain the plant in a safe condition, protect the environment from greenhouse gas emissions and maintain fiscal responsibility by ensuring natural resources are not wasted. APS is currently becoming engaged with various organizations to understand the larger issue of methane emissions associated with natural gas exploration, production, and distribution emissions methodology.

C5. Emissions methodology

C5.1

(C5.1) Is this your first year of reporting emissions data to CDP?

No

C5.1a

(C5.1a) Has your organization undergone any structural changes in the reporting year, or are any previous structural changes being accounted for in this disclosure of emissions data?

Row 1

Has there been a structural change?

No

Name of organization(s) acquired, divested from, or merged with

<Not Applicable>

Details of structural change(s), including completion dates

<Not Applicable>

C5.1b

(C5.1b) Has your emissions accounting methodology, boundary, and/or reporting year definition changed in the reporting year?

	Change(s) in methodology, boundary, and/or reporting year definition?	Details of methodology, boundary, and/or reporting year definition change(s)
Row 1	No	<Not Applicable>

C5.2

(C5.2) Provide your base year and base year emissions.

Scope 1

Base year start
January 1 2005

Base year end
December 31 2005

Base year emissions (metric tons CO2e)
16661531

Comment
2005 is used as the Scope 1 baseline year to align our carbon emission reductions with the targets set at COP 21.

Scope 2 (location-based)

Base year start
January 1 2020

Base year end
December 31 2020

Base year emissions (metric tons CO2e)
116939

Comment
2020 is used as the baseline year for Scope 2 carbon emissions because this is the first year we updated our methodology.

Scope 2 (market-based)

Base year start
January 1 2020

Base year end
December 31 2020

Base year emissions (metric tons CO2e)
116939

Comment
2020 is used as the baseline year for Scope 2 carbon emissions because this is the first year we updated our methodology.

Scope 3 category 1: Purchased goods and services

Base year start
January 1 2019

Base year end
December 31 2019

Base year emissions (metric tons CO2e)
339

Comment

Scope 3 category 2: Capital goods

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3 category 3: Fuel-and-energy-related activities (not included in Scope 1 or 2)

Base year start
January 1 2016

Base year end
December 31 2016

Base year emissions (metric tons CO2e)
2647368

Comment

Scope 3 category 4: Upstream transportation and distribution

Base year start
January 1 2016

Base year end
December 30 2016

Base year emissions (metric tons CO2e)
6043

Comment

Scope 3 category 5: Waste generated in operations

Base year start
January 1 2021

Base year end
December 31 2021

Base year emissions (metric tons CO2e)
1685

Comment

Scope 3 category 6: Business travel

Base year start
January 1 2016

Base year end
December 30 2016

Base year emissions (metric tons CO2e)
4153

Comment

Scope 3 category 7: Employee commuting

Base year start
January 1 2016

Base year end
December 30 2016

Base year emissions (metric tons CO2e)
3586

Comment

Scope 3 category 8: Upstream leased assets

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3 category 9: Downstream transportation and distribution

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3 category 10: Processing of sold products

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3 category 11: Use of sold products

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3 category 12: End of life treatment of sold products

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3 category 13: Downstream leased assets

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3 category 14: Franchises

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3 category 15: Investments

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3: Other (upstream)

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3: Other (downstream)

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

C5.3

(C5.3) Select the name of the standard, protocol, or methodology you have used to collect activity data and calculate emissions.

The Climate Registry: Electric Power Sector (EPS) Protocol
The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (Revised Edition)
US EPA Mandatory Greenhouse Gas Reporting Rule

C6. Emissions data

C6.1

(C6.1) What were your organization's gross global Scope 1 emissions in metric tons CO2e?

Reporting year

Gross global Scope 1 emissions (metric tons CO2e)
11329468

Start date
<Not Applicable>

End date
<Not Applicable>

Comment

C6.2

(C6.2) Describe your organization's approach to reporting Scope 2 emissions.

Row 1

Scope 2, location-based
We are reporting a Scope 2, location-based figure

Scope 2, market-based
We are reporting a Scope 2, market-based figure

Comment

C6.3

(C6.3) What were your organization's gross global Scope 2 emissions in metric tons CO2e?

Reporting year

Scope 2, location-based
131917

Scope 2, market-based (if applicable)
112162

Start date
<Not Applicable>

End date
<Not Applicable>

Comment

C6.4

(C6.4) Are there any sources (e.g. facilities, specific GHGs, activities, geographies, etc.) of Scope 1 and Scope 2 emissions that are within your selected reporting boundary which are not included in your disclosure?
No

C6.5

(C6.5) Account for your organization's gross global Scope 3 emissions, disclosing and explaining any exclusions.

Purchased goods and services

Evaluation status
Relevant, calculated

Emissions in reporting year (metric tons CO2e)
228

Emissions calculation methodology
Spend-based method

Percentage of emissions calculated using data obtained from suppliers or value chain partners
100

Please explain
APS receives total dollars spent on paper purchased for printing from our Supply Chain department. The CO2e emissions are then calculated by APS Sustainability team using the Greenhouse Gas Protocol Scope 3 evaluator web-based tool.

Capital goods

Evaluation status
Not relevant, explanation provided

Emissions in reporting year (metric tons CO2e)
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners
<Not Applicable>

Please explain
We do not separate capital goods from overall purchased goods.

Fuel-and-energy-related activities (not included in Scope 1 or 2)

Evaluation status
Relevant, calculated

Emissions in reporting year (metric tons CO2e)
2971655

Emissions calculation methodology
Site-specific method

Percentage of emissions calculated using data obtained from suppliers or value chain partners
99

Please explain
CO2e emissions are associated with purchase power agreements from conventional sources such as gas units. marketing and trading purchases (resales) and renewable purchased power.

Upstream transportation and distribution

Evaluation status
Relevant, calculated

Emissions in reporting year (metric tons CO2e)
7046

Emissions calculation methodology
Distance-based method

Percentage of emissions calculated using data obtained from suppliers or value chain partners
100

Please explain
APS receives total miles from our logistics firm that handles the majority of our shipping needs. The CO2e emissions are calculated by APS using the EPA Emission Factors for Greenhouse Inventories and the 5th Assessment of Global Warming Potentials. Specifically, the product transport emission factors for medium and heavy-duty trucks.

Waste generated in operations

Evaluation status
Relevant, calculated

Emissions in reporting year (metric tons CO2e)
1405

Emissions calculation methodology
Waste-type-specific method

Percentage of emissions calculated using data obtained from suppliers or value chain partners
100

Please explain
Waste data includes the scrap metal, small pole and pad mount transformers, single stream (co-mingled) recycling, and other recycling as captured through Investment Recovery only. Investment Recovery receives data from vendors who recycle our waste.

Business travel

Evaluation status
Relevant, calculated

Emissions in reporting year (metric tons CO2e)
443

Emissions calculation methodology
Supplier-specific method
Spend-based method
Distance-based method

Percentage of emissions calculated using data obtained from suppliers or value chain partners
75

Please explain
Business travel data about APS employees is recorded by our business travel agency, rental miles are provided by the approved rental car agencies for employee travel, and reimbursement miles are provided by our internal accounting based on a type of cost code. All APS travel must be approved at the Vice President's for conference travel and at the leader level for local travel. Employees are asked to use teleconferencing as much as possible to reduce overall miles travelled by employees.

Employee commuting

Evaluation status
Relevant, calculated

Emissions in reporting year (metric tons CO2e)
306

Emissions calculation methodology
Distance-based method

Percentage of emissions calculated using data obtained from suppliers or value chain partners
100

Please explain
We encourage employees to take part in the Trip Reduction Program. This program focuses on reducing the number of single-occupancy vehicles commuting to our work sites. Maricopa County is a customer of APS, but the survey is not performed as part of our value chain.

Upstream leased assets

Evaluation status
Not relevant, explanation provided

Emissions in reporting year (metric tons CO2e)
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners
<Not Applicable>

Please explain
APS does not have any upstream leased assets.

Downstream transportation and distribution

Evaluation status
Not relevant, explanation provided

Emissions in reporting year (metric tons CO2e)
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners
<Not Applicable>

Please explain
APS generates and distributes electricity. Transmission losses are accounted in our Scope 1 emissions at the point of generation and purchased power line losses are accounted for in Scope 2 emissions.

Processing of sold products

Evaluation status
Not relevant, explanation provided

Emissions in reporting year (metric tons CO2e)
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners
<Not Applicable>

Please explain
APS generates and distributes electricity. Electricity is an end product and is not processed. Therefore, we do not have Scope 3 emissions related to processing sold electricity.

Use of sold products

Evaluation status
Not relevant, explanation provided

Emissions in reporting year (metric tons CO2e)
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners
<Not Applicable>

Please explain
Emissions from the end use of electricity, our product is calculated into our Scope 1 emissions at the point of generation. Emissions of sold electricity are therefore not included in our Scope 3 emissions.

End of life treatment of sold products

Evaluation status
Not relevant, explanation provided

Emissions in reporting year (metric tons CO2e)
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners
<Not Applicable>

Please explain
The use of electricity is considered as the end-of-life treatment of our product. This is calculated in our Scope 1 emissions and therefore not included in our Scope 3 emissions.

Downstream leased assets

Evaluation status
Not relevant, explanation provided

Emissions in reporting year (metric tons CO2e)
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners
<Not Applicable>

Please explain
APS does not have downstream leased assets.

Franchises

Evaluation status
Not relevant, explanation provided

Emissions in reporting year (metric tons CO2e)
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners
<Not Applicable>

Please explain
APS does not have any franchises.

Investments

Evaluation status
Not evaluated

Emissions in reporting year (metric tons CO2e)
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners
<Not Applicable>

Please explain
APS does not have a current method to evaluate emissions by any of our investments.

Other (upstream)

Evaluation status
Not relevant, explanation provided

Emissions in reporting year (metric tons CO2e)
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners
<Not Applicable>

Please explain
APS does not have any additional upstream sources in 2021.

Other (downstream)

Evaluation status
Not relevant, explanation provided

Emissions in reporting year (metric tons CO2e)
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners
<Not Applicable>

Please explain
APS does not have any additional downstream sources in 2021.

C6.7

(C6.7) Are carbon dioxide emissions from biogenic carbon relevant to your organization?
Yes

C6.7a

(C6.7a) Provide the emissions from biogenic carbon relevant to your organization in metric tons CO2.

	CO2 emissions from biogenic carbon (metric tons CO2)	Comment
Row 1	3828	

C6.10

(C6.10) Describe your gross global combined Scope 1 and 2 emissions for the reporting year in metric tons CO2e per unit currency total revenue and provide any additional intensity metrics that are appropriate to your business operations.

Intensity figure
0.003

Metric numerator (Gross global combined Scope 1 and 2 emissions, metric tons CO2e)
11441630

Metric denominator
unit total revenue

Metric denominator: Unit total
3803840000

Scope 2 figure used
Market-based

% change from previous year
5

Direction of change
Decreased

Reason for change
In 2021, the gross global combined Scope 1 and 2 emissions in metric tons CO2e per dollar of revenue intensity decreased by 5% since last year due to increased emission per dollar efficiency from our emission reduction initiatives to reach our goal of 65% of our energy supply from clean resources as well as to generate 45% of our energy from renewable sources by 2030. We have had an overall 32% decrease in annual carbon dioxide emissions since 2005. During 2021, the share of APS's energy supply from clean resources was 50%, which includes energy from nuclear, renewables and demand side management (DSM). We are on track to reach our goal of 65% clean resource mix by 2030. In addition, by 2030, 45% of our generation portfolio will be from renewable energy. Renewable energy is measured in accordance with the Arizona Corporation Commission's Renewable Energy Standard as a percentage of retail sales. In 2021,15% of sales were from renewable energy.

Intensity figure
0.336

Metric numerator (Gross global combined Scope 1 and 2 emissions, metric tons CO2e)
11441630

Metric denominator
megawatt hour transmitted (MWh)

Metric denominator: Unit total
34076000

Scope 2 figure used
Market-based

% change from previous year
0.61

Direction of change
Decreased

Reason for change
In 2021, gross global combined Scope 1 and 2 emissions for the reporting year in metric tons CO2e emissions per total MWh transmitted (a combination of generated and purchased generation) decreased by less than 1%. In 2021, we had a relatively flat overall carbon emissions and relatively flat number of megawatts delivered to our customers resulting in a small, less than 1%, decrease change in intensity from 2020 to 2021. There was a total increase of 67,543 mtons CO2e and an increase of 408,000 MWh delivered, resulting in less than 1% change from 2020 to 2021. The small increase in carbon is a result of an increase of coal generation (538 GWH) and a decrease in gas generation 989 (GWH) due to market prices and availability of resources, while our overall owned generation decreased by 394 GWH. However, we have had an overall 32% decrease in annual carbon dioxide emissions since 2005. During 2021, the share of APS's energy supply from clean resources was 50%, which includes energy from nuclear, renewables and demand side management (DSM). We are on track to reach our goal of 65% clean resource mix by 2030. In addition, by 2030, 45% of our generation portfolio will be from renewable energy. Renewable energy is measured in accordance with the Arizona Corporation Commission's Renewable Energy Standard as a percentage of retail sales. In 2021,15% of sales were from renewable energy.

C7. Emissions breakdowns

C7.1

(C7.1) Does your organization break down its Scope 1 emissions by greenhouse gas type?
Yes

C7.1a

(C7.1a) Break down your total gross global Scope 1 emissions by greenhouse gas type and provide the source of each used greenhouse warming potential (GWP).

Greenhouse gas	Scope 1 emissions (metric tons of CO2e)	GWP Reference
CO2	11263595	IPCC Fifth Assessment Report (AR5 – 100 year)
SF6	4861	IPCC Fifth Assessment Report (AR5 – 100 year)
CH4	25977	IPCC Fifth Assessment Report (AR5 – 100 year)
N2O	35034	IPCC Fifth Assessment Report (AR5 – 100 year)

C-EU7.1b

(C-EU7.1b) Break down your total gross global Scope 1 emissions from electric utilities value chain activities by greenhouse gas type.

	Gross Scope 1 CO2 emissions (metric tons CO2)	Gross Scope 1 methane emissions (metric tons CH4)	Gross Scope 1 SF6 emissions (metric tons SF6)	Total gross Scope 1 emissions (metric tons CO2e)	Comment
Fugitives	0	0	0.21	4861	Emissions from our owned generation.
Combustion (Electric utilities)	11248266	25786	0	11313494	
Combustion (Gas utilities)	0	0	0	0	APS is not a gas utility.
Combustion (Other)	15328	192	0	15974	Diesel and gasoline from mobile fleet and generators.
Emissions not elsewhere classified	0	0	0	0	No additional emissions to report.

C7.2

(C7.2) Break down your total gross global Scope 1 emissions by country/region.

Country/Region	Scope 1 emissions (metric tons CO2e)
United States of America	11329467.83

C7.3

(C7.3) Indicate which gross global Scope 1 emissions breakdowns you are able to provide.

By business division
By facility
By activity

C7.3a

(C7.3a) Break down your total gross global Scope 1 emissions by business division.

Business division	Scope 1 emissions (metric ton CO2e)
Generation. All emissions based on owned energy production.	11313494
Transmission and Distribution. All emissions based on fleet and mobile generators.	15974

C7.3b

(C7.3b) Break down your total gross global Scope 1 emissions by business facility.

Facility	Scope 1 emissions (metric tons CO2e)	Latitude	Longitude
Four Corners Power Plant	4913686	40.929011	-121.544389
Cholla Power Plant	2291550	34.94	-110.33
Ocotillo Power Plant	360843	33.4225	-111.9122
West Phoenix Power Plant	1287528	33.773441	-84.394931
Redhawk Power Plant	2079163	33.335833	-112.840528
Yucca Power Plant	106716	32.715235	-114.710441
Saguaro Power Plant	63757	32.552181	-111.298135
Douglas Power Plant	71	31.363622	-109.552532
Sundance Power Plant	206862	53.5075	-114.557222

C7.3c

(C7.3c) Break down your total gross global Scope 1 emissions by business activity.

Activity	Scope 1 emissions (metric tons CO2e)
Stationary Combustion	11313494
Mobile Combustion	15974
Fugitive Combustion	4861

C-CE7.4/C-CH7.4/C-CO7.4/C-EU7.4/C-MM7.4/C-OG7.4/C-ST7.4/C-TO7.4/C-TS7.4

(C-CE7.4/C-CH7.4/C-CO7.4/C-EU7.4/C-MM7.4/C-OG7.4/C-ST7.4/C-TO7.4/C-TS7.4) Break down your organization's total gross global Scope 1 emissions by sector production activity in metric tons CO2e.

	Gross Scope 1 emissions, metric tons CO2e	Net Scope 1 emissions , metric tons CO2e	Comment
Cement production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Chemicals production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Coal production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Electric utility activities	11329467.83	<Not Applicable>	
Metals and mining production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Oil and gas production activities (upstream)	<Not Applicable>	<Not Applicable>	<Not Applicable>
Oil and gas production activities (midstream)	<Not Applicable>	<Not Applicable>	<Not Applicable>
Oil and gas production activities (downstream)	<Not Applicable>	<Not Applicable>	<Not Applicable>
Steel production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Transport OEM activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Transport services activities	<Not Applicable>	<Not Applicable>	<Not Applicable>

C7.9

(C7.9) How do your gross global emissions (Scope 1 and 2 combined) for the reporting year compare to those of the previous reporting year?

Increased

C7.9a

(C7.9a) Identify the reasons for any change in your gross global emissions (Scope 1 and 2 combined), and for each of them specify how your emissions compare to the previous year.

	Change in emissions (metric tons CO2e)	Direction of change	Emissions value (percentage)	Please explain calculation
Change in renewable energy consumption	58919	Increased	0.52	APS consumes power from our own energy delivery grid, the mix of power delivered includes generated and purchased renewable energy. In 2021, the total RE (purchased and generated) was 2,724 GWH of a total of 34,076 GWH of energy sources to meet our delivery needs. Whereas in 2020, the total RE (generated and purchased) was 2,857 GWH of the total 33,668 GWH of energy sources to meet our delivery needs. This accounted for a .52% increase in CO2e emissions as the decrease in renewable generation of 133GWh is approximately 58,919 mtons CO2e. [58,919 mtons CO2e (change in Scope 1+2 emissions attributed to renewable energy consumption)/ 11,374,087 mtons CO2e (2021 Scope 1&2 emissions)]x100 = 0.52%.
Other emissions reduction activities	35915	Decreased	0.32	Emissions reduction activities included improved efforts in SF6 emissions by implementing process, procedure and tracking improvements to reduce emissions. In addition, we made equipment upgrades, including replacing leaking breakers APS total SF6 emissions in 2020 were 40,777 metric tons CO2e and 4,861 metric tons CO2e in 2021. [35,915 mtons CO2 (change in Scope 1+2 emissions attributed to improved SF6 processes and procedures)/11,374,087 mtons CO2e (2020 Scope 1&2 emissions)]x100 = .32%
Divestment	0	No change	0	No divestment during 2021
Acquisitions	0	No change	0	No acquisitions during 2021
Mergers	0	No change	0	No mergers during 2021
Change in output	491609	Decreased	4.32	In 2021, total generation from gas, and oil was 9,626 GWh, this is 989 GWh less more than in 2020 (10,615 GWh), this resulted in a decrease of 491,609 mtons of CO2e for our owned gas and oil generation fleet. (4,596,550 mtons CO2e in 2020 and 4,101,941 mtons CO2e in 2020). This accounted for a decrease of X% of CO2e emissions. [-491,609 mtons CO2e (change in Scope 1+2 emissions attributed to change in output)/ 11,374,087 mtons CO2e (2020 Scope 1&2 emissions)]x100 = 4.32%
Change in methodology	0	No change	0	No methodology changes during 2021
Change in boundary	0	No change	0	No boundary changes during 2021
Change in physical operating conditions	0	No change	0	Projections for the southwest United States from climate change models include an increase in the number of extreme hot days in the summer, less precipitation in the form of snow and the earlier runoff of snowmelt, more wildfires land and water shortages. The year 2021 tied for the 10th warmest year recorded in the history of Phoenix, Arizona and tied for 8th warmest in Yuma, both in our service territory. The year 2021 started with a moderate La Nina pattern and the typical drier than normal conditions across the region. April 2021 ended up the 5th hottest on record in Phoenix while June 2021 was the hottest June ever recorded in Phoenix.
Unidentified	0	No change	0	No additional changes to report
Other	0	No change	0	No additional changes to report

C7.9b

(C7.9b) Are your emissions performance calculations in C7.9 and C7.9a based on a location-based Scope 2 emissions figure or a market-based Scope 2 emissions figure?

Market-based

C8. Energy

C8.1

(C8.1) What percentage of your total operational spend in the reporting year was on energy?

More than 70% but less than or equal to 75%

C8.2

(C8.2) Select which energy-related activities your organization has undertaken.

	Indicate whether your organization undertook this energy-related activity in the reporting year
Consumption of fuel (excluding feedstocks)	Yes
Consumption of purchased or acquired electricity	Yes
Consumption of purchased or acquired heat	No
Consumption of purchased or acquired steam	No
Consumption of purchased or acquired cooling	No
Generation of electricity, heat, steam, or cooling	Yes

C8.2a

(C8.2a) Report your organization's energy consumption totals (excluding feedstocks) in MWh.

	Heating value	MWh from renewable sources	MWh from non-renewable sources	Total (renewable and non-renewable) MWh
Consumption of fuel (excluding feedstock)	HHV (higher heating value)	623273	25666718	26289991
Consumption of purchased or acquired electricity	<Not Applicable>	2101000	5684887	7785887
Consumption of purchased or acquired heat	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>
Consumption of purchased or acquired steam	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>
Consumption of purchased or acquired cooling	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>
Consumption of self-generated non-fuel renewable energy	<Not Applicable>	0	<Not Applicable>	0
Total energy consumption	<Not Applicable>	2724273	31351605	34075878

C8.2b

(C8.2b) Select the applications of your organization's consumption of fuel.

	Indicate whether your organization undertakes this fuel application
Consumption of fuel for the generation of electricity	Yes
Consumption of fuel for the generation of heat	No
Consumption of fuel for the generation of steam	No
Consumption of fuel for the generation of cooling	No
Consumption of fuel for co-generation or tri-generation	No

C8.2c

(C8.2c) State how much fuel in MWh your organization has consumed (excluding feedstocks) by fuel type.

Sustainable biomass

Heating value
Unable to confirm heating value

Total fuel MWh consumed by the organization
0

MWh fuel consumed for self-generation of electricity
0

MWh fuel consumed for self-generation of heat
0

MWh fuel consumed for self-generation of steam
<Not Applicable>

MWh fuel consumed for self-generation of cooling
<Not Applicable>

MWh fuel consumed for self- cogeneration or self-trigeneration
<Not Applicable>

Comment

Other biomass

Heating value
Unable to confirm heating value

Total fuel MWh consumed by the organization
0

MWh fuel consumed for self-generation of electricity
0

MWh fuel consumed for self-generation of heat
0

MWh fuel consumed for self-generation of steam
<Not Applicable>

MWh fuel consumed for self-generation of cooling
<Not Applicable>

MWh fuel consumed for self- cogeneration or self-trigeneration
<Not Applicable>

Comment

Other renewable fuels (e.g. renewable hydrogen)

Heating value
HHV

Total fuel MWh consumed by the organization
623273

MWh fuel consumed for self-generation of electricity
0

MWh fuel consumed for self-generation of heat
0

MWh fuel consumed for self-generation of steam
<Not Applicable>

MWh fuel consumed for self-generation of cooling
<Not Applicable>

MWh fuel consumed for self- cogeneration or self-trigeneration
<Not Applicable>

Comment
Solar Energy

Coal

Heating value
HHV

Total fuel MWh consumed by the organization
6836238

MWh fuel consumed for self-generation of electricity
0

MWh fuel consumed for self-generation of heat
0

MWh fuel consumed for self-generation of steam
<Not Applicable>

MWh fuel consumed for self-generation of cooling
<Not Applicable>

MWh fuel consumed for self- cogeneration or self-trigeneration
<Not Applicable>

Comment

Oil

Heating value
HHV

Total fuel MWh consumed by the organization
1272

MWh fuel consumed for self-generation of electricity
0

MWh fuel consumed for self-generation of heat
0

MWh fuel consumed for self-generation of steam
<Not Applicable>

MWh fuel consumed for self-generation of cooling
<Not Applicable>

MWh fuel consumed for self- cogeneration or self-trigeneration
<Not Applicable>

Comment

Gas

Heating value
HHV

Total fuel MWh consumed by the organization
9624933

MWh fuel consumed for self-generation of electricity
0

MWh fuel consumed for self-generation of heat
0

MWh fuel consumed for self-generation of steam
<Not Applicable>

MWh fuel consumed for self-generation of cooling
<Not Applicable>

MWh fuel consumed for self- cogeneration or self-trigeneration
<Not Applicable>

Comment

Other non-renewable fuels (e.g. non-renewable hydrogen)

Heating value
HHV

Total fuel MWh consumed by the organization
9204276

MWh fuel consumed for self-generation of electricity
0

MWh fuel consumed for self-generation of heat
0

MWh fuel consumed for self-generation of steam
<Not Applicable>

MWh fuel consumed for self-generation of cooling
<Not Applicable>

MWh fuel consumed for self- cogeneration or self-trigeneration
<Not Applicable>

Comment
Nuclear

Total fuel

Heating value
HHV

Total fuel MWh consumed by the organization
26289992

MWh fuel consumed for self-generation of electricity
0

MWh fuel consumed for self-generation of heat
0

MWh fuel consumed for self-generation of steam
<Not Applicable>

MWh fuel consumed for self-generation of cooling
<Not Applicable>

MWh fuel consumed for self- cogeneration or self-trigeneration
<Not Applicable>

Comment

C-EU8.2d

(C-EU8.2d) For your electric utility activities, provide a breakdown of your total power plant capacity, generation, and related emissions during the reporting year by source.

Coal – hard

Nameplate capacity (MW)
1357

Gross electricity generation (GWh)
7437

Net electricity generation (GWh)
6836

Absolute scope 1 emissions (metric tons CO2e)
7205236

Scope 1 emissions intensity (metric tons CO2e per GWh)
1054

Comment

Lignite

Nameplate capacity (MW)
0

Gross electricity generation (GWh)
0

Net electricity generation (GWh)
0

Absolute scope 1 emissions (metric tons CO2e)
0

Scope 1 emissions intensity (metric tons CO2e per GWh)
0

Comment

Oil

Nameplate capacity (MW)
70

Gross electricity generation (GWh)
4.4

Net electricity generation (GWh)
1.3

Absolute scope 1 emissions (metric tons CO2e)
1609

Scope 1 emissions intensity (metric tons CO2e per GWh)
1265

Comment

Gas

Nameplate capacity (MW)
3557

Gross electricity generation (GWh)
9893

Net electricity generation (GWh)
9625

Absolute scope 1 emissions (metric tons CO2e)
4103332

Scope 1 emissions intensity (metric tons CO2e per GWh)
426

Comment

Sustainable biomass

Nameplate capacity (MW)
0

Gross electricity generation (GWh)
0

Net electricity generation (GWh)
0

Absolute scope 1 emissions (metric tons CO2e)
0

Scope 1 emissions intensity (metric tons CO2e per GWh)
0

Comment

Other biomass

Nameplate capacity (MW)
0

Gross electricity generation (GWh)
0

Net electricity generation (GWh)
0

Absolute scope 1 emissions (metric tons CO2e)
0

Scope 1 emissions intensity (metric tons CO2e per GWh)
0

Comment

Waste (non-biomass)

Nameplate capacity (MW)
0

Gross electricity generation (GWh)
0

Net electricity generation (GWh)
0

Absolute scope 1 emissions (metric tons CO2e)
0

Scope 1 emissions intensity (metric tons CO2e per GWh)
0

Comment

Nuclear

Nameplate capacity (MW)
1146

Gross electricity generation (GWh)
9711

Net electricity generation (GWh)
9204

Absolute scope 1 emissions (metric tons CO2e)
0

Scope 1 emissions intensity (metric tons CO2e per GWh)
0

Comment

Fossil-fuel plants fitted with CCS

Nameplate capacity (MW)
0

Gross electricity generation (GWh)
0

Net electricity generation (GWh)
0

Absolute scope 1 emissions (metric tons CO2e)
0

Scope 1 emissions intensity (metric tons CO2e per GWh)
0

Comment

Geothermal

Nameplate capacity (MW)
0

Gross electricity generation (GWh)
0

Net electricity generation (GWh)
0

Absolute scope 1 emissions (metric tons CO2e)
0

Scope 1 emissions intensity (metric tons CO2e per GWh)
0

Comment

Hydropower

Nameplate capacity (MW)
0

Gross electricity generation (GWh)
0

Net electricity generation (GWh)
0

Absolute scope 1 emissions (metric tons CO2e)
0

Scope 1 emissions intensity (metric tons CO2e per GWh)
0

Comment

Wind

Nameplate capacity (MW)
0

Gross electricity generation (GWh)
0

Net electricity generation (GWh)
0

Absolute scope 1 emissions (metric tons CO2e)
0

Scope 1 emissions intensity (metric tons CO2e per GWh)
0

Comment

Solar

Nameplate capacity (MW)
245

Gross electricity generation (GWh)
587

Net electricity generation (GWh)
623

Absolute scope 1 emissions (metric tons CO2e)
0

Scope 1 emissions intensity (metric tons CO2e per GWh)
0

Comment

Marine

Nameplate capacity (MW)
0

Gross electricity generation (GWh)
0

Net electricity generation (GWh)
0

Absolute scope 1 emissions (metric tons CO2e)
0

Scope 1 emissions intensity (metric tons CO2e per GWh)
0

Comment

Other renewable

Nameplate capacity (MW)
0

Gross electricity generation (GWh)
0

Net electricity generation (GWh)
0

Absolute scope 1 emissions (metric tons CO2e)
0

Scope 1 emissions intensity (metric tons CO2e per GWh)
0

Comment

Other non-renewable

Nameplate capacity (MW)
0

Gross electricity generation (GWh)
0

Net electricity generation (GWh)
0

Absolute scope 1 emissions (metric tons CO2e)
0

Scope 1 emissions intensity (metric tons CO2e per GWh)

Comment

Total

Nameplate capacity (MW)
6375

Gross electricity generation (GWh)
27632

Net electricity generation (GWh)
26290

Absolute scope 1 emissions (metric tons CO2e)
11310176

Scope 1 emissions intensity (metric tons CO2e per GWh)
430

Comment

C8.2g

(C8.2g) Provide a breakdown of your non-fuel energy consumption by country.

Country/area
United States of America

Consumption of electricity (MWh)
34075878

Consumption of heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]
34075878

Is this consumption excluded from your RE100 commitment?
<Not Applicable>

C-EU8.4

(C-EU8.4) Does your electric utility organization have a transmission and distribution business?
Yes

C-EU8.4a

(C-EU8.4a) Disclose the following information about your transmission and distribution business.

Country/Region
United States of America

Voltage level
Distribution (low voltage)

Annual load (GWh)
34076

Annual energy losses (% of annual load)
4

Scope where emissions from energy losses are accounted for
Scope 1

Emissions from energy losses (metric tons CO2e)
14993440

Length of network (km)
64374

Number of connections
1317313

Area covered (km2)
89733

Comment
APS owns transmission (above 69kV) and distribution lines. However, the majority of the lines are distribution so both types of lines are included in this response. The number of connections shown in the number of electric customers served at year end. Additionally, our line losses from purchased power are covered in our Scope 2 emissions. However, line losses for electricity we generate and distribute are accounted for at the point of generation, Scope 1. Since we cannot choose two scopes, for the purpose of this response, Scope 1 was chosen as the majority of the power we distribute is from power that we generate.

C9. Additional metrics

C9.1

(C9.1) Provide any additional climate-related metrics relevant to your business.

Description
Please select

Metric value

Metric numerator

Metric denominator (intensity metric only)

% change from previous year

Direction of change
<Not Applicable>

Please explain

C-EU9.5a

(C-EU9.5a) Break down, by source, your organization's CAPEX in the reporting year and CAPEX planned over the next 5 years.

Coal – hard

CAPEX in the reporting year for power generation from this source (unit currency as selected in C0.4)
63000000

CAPEX in the reporting year for power generation from this source as % of total CAPEX for power generation in the reporting year
13

CAPEX planned over the next 5 years for power generation from this source as % of total CAPEX planned for power generation over the next 5 years
6

Explain your CAPEX calculations, including any assumptions
CAPEX is not provided publicly beyond a 3-year estimate. Therefore, we are providing a three (2022-2024) year total instead of a 5-year total. All figures with the exception of 2021 data are estimations.

Lignite

CAPEX in the reporting year for power generation from this source (unit currency as selected in C0.4)
0

CAPEX in the reporting year for power generation from this source as % of total CAPEX for power generation in the reporting year
0

CAPEX planned over the next 5 years for power generation from this source as % of total CAPEX planned for power generation over the next 5 years
0

Explain your CAPEX calculations, including any assumptions
N/A

Oil

CAPEX in the reporting year for power generation from this source (unit currency as selected in C0.4)
0

CAPEX in the reporting year for power generation from this source as % of total CAPEX for power generation in the reporting year
0

CAPEX planned over the next 5 years for power generation from this source as % of total CAPEX planned for power generation over the next 5 years
0

Explain your CAPEX calculations, including any assumptions
N/A

Gas

CAPEX in the reporting year for power generation from this source (unit currency as selected in C0.4)
82000000

CAPEX in the reporting year for power generation from this source as % of total CAPEX for power generation in the reporting year
17

CAPEX planned over the next 5 years for power generation from this source as % of total CAPEX planned for power generation over the next 5 years
20

Explain your CAPEX calculations, including any assumptions
CAPEX is not provided publicly beyond a 3-year estimate. Therefore, we are providing a three (2022-2024) year forecast total instead of a 5-year forecast total. All figures with the exception of 2021 data are estimations. CAPEX resource strategy is influenced by our resource needs, financial plans and our climate targets. Our goal is to provide 100% clean, carbon-free electricity by 2050 with a nearer-term 2030 target of achieving a resource mix that is 65% clean energy, with 45% of our generation portfolio coming from renewable energy, and ending all coal fired generation by 2031.

Sustainable biomass

CAPEX in the reporting year for power generation from this source (unit currency as selected in C0.4)
0

CAPEX in the reporting year for power generation from this source as % of total CAPEX for power generation in the reporting year
0

CAPEX planned over the next 5 years for power generation from this source as % of total CAPEX planned for power generation over the next 5 years
0

Explain your CAPEX calculations, including any assumptions
N/A

Other biomass

CAPEX in the reporting year for power generation from this source (unit currency as selected in C0.4)
0

CAPEX in the reporting year for power generation from this source as % of total CAPEX for power generation in the reporting year
0

CAPEX planned over the next 5 years for power generation from this source as % of total CAPEX planned for power generation over the next 5 years
0

Explain your CAPEX calculations, including any assumptions
N/A

Waste (non-biomass)

CAPEX in the reporting year for power generation from this source (unit currency as selected in C0.4)
0

CAPEX in the reporting year for power generation from this source as % of total CAPEX for power generation in the reporting year
0

CAPEX planned over the next 5 years for power generation from this source as % of total CAPEX planned for power generation over the next 5 years
0

Explain your CAPEX calculations, including any assumptions
N/A

Nuclear

CAPEX in the reporting year for power generation from this source (unit currency as selected in C0.4)
112000000

CAPEX in the reporting year for power generation from this source as % of total CAPEX for power generation in the reporting year
24

CAPEX planned over the next 5 years for power generation from this source as % of total CAPEX planned for power generation over the next 5 years
18

Explain your CAPEX calculations, including any assumptions
CAPEX is not provided publicly beyond a 3-year estimate. Therefore, we are providing a three (2022-2024) year forecast total instead of a 5-year forecast total. All figures with the exception of 2021 data are estimations. CAPEX resource strategy is influenced by our resource needs, financial plans and our climate targets. Our goal is to provide 100% clean, carbon-free electricity by 2050 with a nearer-term 2030 target of achieving a resource mix that is 65% clean energy, with 45% of our generation portfolio coming from renewable energy, and ending all coal fired generation by 2031.

Geothermal

CAPEX in the reporting year for power generation from this source (unit currency as selected in C0.4)
0

CAPEX in the reporting year for power generation from this source as % of total CAPEX for power generation in the reporting year
0

CAPEX planned over the next 5 years for power generation from this source as % of total CAPEX planned for power generation over the next 5 years
0

Explain your CAPEX calculations, including any assumptions
N/A

Hydropower

CAPEX in the reporting year for power generation from this source (unit currency as selected in C0.4)
0

CAPEX in the reporting year for power generation from this source as % of total CAPEX for power generation in the reporting year
0

CAPEX planned over the next 5 years for power generation from this source as % of total CAPEX planned for power generation over the next 5 years
0

Explain your CAPEX calculations, including any assumptions
N/A

Wind

CAPEX in the reporting year for power generation from this source (unit currency as selected in C0.4)
0

CAPEX in the reporting year for power generation from this source as % of total CAPEX for power generation in the reporting year
0

CAPEX planned over the next 5 years for power generation from this source as % of total CAPEX planned for power generation over the next 5 years
0

Explain your CAPEX calculations, including any assumptions
N/A

Solar

CAPEX in the reporting year for power generation from this source (unit currency as selected in C0.4)
149000000

CAPEX in the reporting year for power generation from this source as % of total CAPEX for power generation in the reporting year
31

CAPEX planned over the next 5 years for power generation from this source as % of total CAPEX planned for power generation over the next 5 years
46

Explain your CAPEX calculations, including any assumptions
CAPEX is not provided publicly beyond a 3-year estimate. Therefore, we are providing a three (2022-2024) year forecast total instead of a 5-year forecast total. All figures with the exception of 2021 data are estimations. CAPEX resource strategy is influenced by our resource needs, financial plans and our climate targets. Our goal is to provide 100% clean, carbon-free electricity by 2050 with a nearer-term 2030 target of achieving a resource mix that is 65% clean energy, with 45% of our generation portfolio coming from renewable energy, and ending all coal fired generation by 2031. Solar figures include some battery storage equipment that will be incorporated into certain solar facilities.

Marine

CAPEX in the reporting year for power generation from this source (unit currency as selected in C0.4)
0

CAPEX in the reporting year for power generation from this source as % of total CAPEX for power generation in the reporting year
0

CAPEX planned over the next 5 years for power generation from this source as % of total CAPEX planned for power generation over the next 5 years
0

Explain your CAPEX calculations, including any assumptions
N/A

Fossil-fuel plants fitted with CCS

CAPEX in the reporting year for power generation from this source (unit currency as selected in C0.4)
0

CAPEX in the reporting year for power generation from this source as % of total CAPEX for power generation in the reporting year
0

CAPEX planned over the next 5 years for power generation from this source as % of total CAPEX planned for power generation over the next 5 years
0

Explain your CAPEX calculations, including any assumptions
N/A

Other renewable (e.g. renewable hydrogen)

CAPEX in the reporting year for power generation from this source (unit currency as selected in C0.4)
0

CAPEX in the reporting year for power generation from this source as % of total CAPEX for power generation in the reporting year
0

CAPEX planned over the next 5 years for power generation from this source as % of total CAPEX planned for power generation over the next 5 years
0

Explain your CAPEX calculations, including any assumptions
N/A

Other non-renewable (e.g. non-renewable hydrogen)

CAPEX in the reporting year for power generation from this source (unit currency as selected in C0.4)

70000000

CAPEX in the reporting year for power generation from this source as % of total CAPEX for power generation in the reporting year

15

CAPEX planned over the next 5 years for power generation from this source as % of total CAPEX planned for power generation over the next 5 years

10

Explain your CAPEX calculations, including any assumptions

CAPEX is not provided publicly beyond a 3-year estimate. Therefore, we are providing a three (2022-2024) year forecast total instead of a 5-year forecast total. All figures with the exception of 2021 data are estimations. CAPEX resource strategy is influenced by our resource needs, financial plans and our climate targets. Our commitment is to provide 100% carbon free electricity by 2050, achieving a resource mix that is 65% clean with 45% of our portfolio coming from renewable energy by 2030, and ending all coal fired generation by 2031.

C-EU9.5b

(C-EU9.5b) Break down your total planned CAPEX in your current CAPEX plan for products and services (e.g. smart grids, digitalization, etc.).

Products and services	Description of product/service	CAPEX planned for product/service	Percentage of total CAPEX planned products and services	End of year CAPEX plan
Other, please specify (Renewables and Energy Storage)	Solar communities programs, energy storage, renewable projects and other clean energy projects	149000000	31	2024
Other, please specify (Environmental)	Generation environmental projects	49000000	10	2024

C-CE9.6/C-CG9.6/C-CH9.6/C-CN9.6/C-CO9.6/C-EU9.6/C-MM9.6/C-OG9.6/C-RE9.6/C-ST9.6/C-TO9.6/C-TS9.6

(C-CE9.6/C-CG9.6/C-CH9.6/C-CN9.6/C-CO9.6/C-EU9.6/C-MM9.6/C-OG9.6/C-RE9.6/C-ST9.6/C-TO9.6/C-TS9.6) Does your organization invest in research and development (R&D) of low-carbon products or services related to your sector activities?

	Investment in low-carbon R&D	Comment
Row 1	Yes	A low- carbon services offering provided by APS is the EV charging demand management pilot program known as the APS SmartCharge program. The objective of the program is to dynamically manage EV charging and educate customers about beneficial charging behavior that occurs during off-peak periods whenever possible. Electric system benefits will be realized by managing EV charging based on seasonal and evolving distribution and system level needs, including demand response (DR) events as needed. This will result in significant customer benefits including fuel savings, lower transportation costs, reduced tailpipe emissions, and more efficient electric system operations that help manage future energy costs. The APS SmartCharge program encourages EV owners to share data on their driving and charging behavior by either installing a data sharing module in the diagnostic port of their car or granting permission to share their car account data using an API with the implementer. SmartCharge participants receive an incentive of $85/year, which includes a $25 sign-up incentive and $5/month incentive for providing ongoing data. Once one year of data is collected, APS will phase in a reward offering to encourage beneficial charging behaviors. Also, as part of this program, APS is offering a $250 rebate to customers that purchase a new connected smart charger. Smart chargers are connected to the internet and can provide telemetry data on home charging behavior as well as participate in load shifting and DR events. Qualifying smart chargers are sold on the APS online marketplace where the rebate is immediately applied at checkout or if the eligible charger is purchased at a local retailer the rebate is reimbursed using an online rebate process. The pilot program is intended to proactively address the growing electric demand from EV charging as EVs become more widely adopted.

C-CO9.6a/C-EU9.6a/C-OG9.6a

(C-CO9.6a/C-EU9.6a/C-OG9.6a) Provide details of your organization's investments in low-carbon R&D for your sector activities over the last three years.

Technology area	Stage of development in the reporting year	Average % of total R&D investment over the last 3 years	R&D investment figure in the reporting year (optional)	Comment
Demand side response programs *Energy management and storage product*	Pilot demonstration	≤20%		The APS SmartCharge program encourages EV owners to share data on their driving and charging behavior by either installing a data sharing module in the diagnostic port of their car or granting permission to share their car account data using an API with the implementer. SmartCharge participants receive an incentive of $85/year, which includes a $25 sign up incentive and $5/month incentive for providing ongoing data. Once one year of data is collected, APS will phase in a reward offering to encourage beneficial charging behaviors. Also, as part of this pilot program, APS is offering a $250 rebate to customers that purchase a new connected smart charger. Smart chargers are connected to the internet and can provide telemetry data on home charging behavior as well as participate in load shifting and Demand Response events. Qualifying smart chargers are sold on the APS online marketplace where the rebate is immediately applied at checkout or if the eligible charger is purchased at a local retailer the rebate is reimbursed using an online rebate process. The EV Charging Demand Management pilot program is intended to proactively address the growing electric demand from EV charging as EVs become more widely adopted.

C10. Verification

C10.1

(C10.1) Indicate the verification/assurance status that applies to your reported emissions.

	Verification/assurance status
Scope 1	Third-party verification or assurance process in place
Scope 2 (location-based or market-based)	Third-party verification or assurance process in place
Scope 3	Third-party verification or assurance process in place

C10.1a

(C10.1a) Provide further details of the verification/assurance undertaken for your Scope 1 emissions, and attach the relevant statements.

Verification or assurance cycle in place
Annual process

Status in the current reporting year
Complete

Type of verification or assurance
Reasonable assurance

Attach the statement
CDP Verification Statement APS CY2021_v2.pdf

Page/ section reference
page 2

Relevant standard
ISO14064-3

Proportion of reported emissions verified (%)
100

C10.1b

(C10.1b) Provide further details of the verification/assurance undertaken for your Scope 2 emissions and attach the relevant statements.

Scope 2 approach
Scope 2 location-based

Verification or assurance cycle in place
Annual process

Status in the current reporting year
Complete

Type of verification or assurance
Reasonable assurance

Attach the statement
CDP Verification Statement APS CY2021_v2.pdf

Page/ section reference
Page 2

Relevant standard
ISO14064-3

Proportion of reported emissions verified (%)
100

Scope 2 approach
Scope 2 market-based

Verification or assurance cycle in place
Annual process

Status in the current reporting year
Complete

Type of verification or assurance
Reasonable assurance

Attach the statement
CDP Verification Statement APS CY2021_v2.pdf

Page/ section reference
page 2

Relevant standard
ISO14064-3

Proportion of reported emissions verified (%)
100

C10.1c

(C10.1c) Provide further details of the verification/assurance undertaken for your Scope 3 emissions and attach the relevant statements.

Scope 3 category
Scope 3: Business travel

Verification or assurance cycle in place
Annual process

Status in the current reporting year
Complete

Type of verification or assurance
Reasonable assurance

Attach the statement
CDP Verification Statement APS CY2021_v2.pdf

Page/section reference
page 2

Relevant standard
ISO14064-3

Proportion of reported emissions verified (%)
100

C10.2

(C10.2) Do you verify any climate-related information reported in your CDP disclosure other than the emissions figures reported in C6.1, C6.3, and C6.5?
No, but we are actively considering verifying within the next two years

C11. Carbon pricing

C11.1

(C11.1) Are any of your operations or activities regulated by a carbon pricing system (i.e. ETS, Cap & Trade or Carbon Tax)?

Yes

C11.1a

(C11.1a) Select the carbon pricing regulation(s) which impacts your operations.

California CaT - ETS

C11.1b

(C11.1b) Complete the following table for each of the emissions trading schemes you are regulated by.

California CaT - ETS

% of Scope 1 emissions covered by the ETS

3

% of Scope 2 emissions covered by the ETS

0

Period start date

January 1 2021

Period end date

December 31 2021

Allowances allocated

357219

Allowances purchased

364845

Verified Scope 1 emissions in metric tons CO2e

312654

Verified Scope 2 emissions in metric tons CO2e

0

Details of ownership

Facilities we own and operate

Comment

C11.1d

(C11.1d) What is your strategy for complying with the systems you are regulated by or anticipate being regulated by?

Since 2012, we have had policies and procedures in place to track and monitor our obligations and allowances, related to the net imports into the state of California, to comply with California's AB-32 cap-and-trade program. The Risk Management group compares obligations and allowances weekly in accordance with our internal GHG Hedge Policy to ensure APS is able to fulfil our Compliance Requirements of the GHG Allowance Process. Additionally, our Back Office Settlements team tracks allowances using the Compliance Instrument Tracking System Service (CITSS) system monthly to validate APS emissions transactions are accurately and completely captured, inventoried, and settled ensuring compliance with the requirements of the Western Climate Initiative cap-and-trade Programs. CITSS tracks compliance instruments (emissions allowances and offsets) from the point of issuance by jurisdictional governments, to ownership, transfer by regulated greenhouse gas emitters and other voluntary or general market participants, and to final compliance retirement.

This strategy has kept us in compliance with our participation in the California cap-and-trade program. In 2021, we allocated 357,219 allowances and purchased364,845 allowances, resulting in a total of 312,654 metric tons of CO2e.

Timescale of implementation for this strategy is immediate and will continue as long as we are participating in the California market.

C11.2

(C11.2) Has your organization originated or purchased any project-based carbon credits within the reporting period?

No

C11.3

(C11.3) Does your organization use an internal price on carbon?

Yes

C11.3a

(C11.3a) Provide details of how your organization uses an internal price on carbon.

Objective for implementing an internal carbon price

Navigate GHG regulations

Other, please specify (Integrated Resource Planning)

GHG Scope

Scope 1

Application

APS has included in its analysis the potential for carbon pricing in its 2020 Integrated Resource Plan (IRP). The CO2 cost included in the IRP analysis was based on the California market cap and trade 2020 CO2 cost of $16.68, escalated at 2.5% beginning in 2025. Prior to 2025, APS's analysis assumed the CO2 cost to be $0.

Actual price(s) used (Currency /metric ton)

16.68

Variance of price(s) used

The CO2 cost included in the IRP analysis was based on the California market cap and trade 2020 CO2 cost of $16.68, escalated at 2.5% beginning in 2025.

Type of internal carbon price

Internal fee

Impact & implication

We use internal price on carbon to measure, model and manage financial and regulatory risks from emerging GHG regulations. For instance, APS has included in its analysis the potential for carbon pricing in its 2020 Integrated Resource Plan (IRP). The CO2 cost included in the IRP analysis was based on the California market cap and trade 2020 CO2 cost of $16.68, escalated at 2.5% beginning in 2025. Prior to 2025, APS's analysis assumed the CO2 cost to be $0. The resulting potential impact based on these assumptions and projected carbon emissions from 2020 thru 2025 is $1,278 million - $1,658 million. These costs could result in higher revenue requirements recovered through a rate review or adjustor mechanisms. The carbon cost will continue to be integrated into future scenarios as we work with stakeholders on our new plan that is currently scheduled to be updated in 2023.

C12. Engagement

C12.1

(C12.1) Do you engage with your value chain on climate-related issues?

Yes, our suppliers

Yes, our customers/clients

C12.1a

(C12.1a) Provide details of your climate-related supplier engagement strategy.

Type of engagement
Information collection (understanding supplier behavior)

Details of engagement
Collect climate change and carbon information at least annually from suppliers

% of suppliers by number
15

% total procurement spend (direct and indirect)
29

% of supplier-related Scope 3 emissions as reported in C6.5
100

Rationale for the coverage of your engagement
Annually, APS engages our suppliers representing approximately 29% of the Company's total spend through a sustainability survey. Our suppliers primarily provide materials and services to our power plants, and the transmission and distribution of our energy. They are a part of key suppliers who are identified through a rigorous segmentation process that includes assessing spend, risk analysis, category strategy alignment and criticality to APS operations. We engage our top tier suppliers, which represent 15% of our total suppliers, as these suppliers to provide products and services that are directly tied to our upstream operations (e.g., generation and distribution of grid electricity) and because we spend a significant amount of dollars in procuring from these suppliers. The survey helps us identify our suppliers' environmental priorities as well as determine if APS and its suppliers are aligned in our sustainability priorities. They survey also includes questions on how they are managing environmental impacts in their operations, including greenhouse gas emissions, energy and water usage, waste and materials management. Additionally, suppliers are incentivized to implement sustainable practices within their businesses as our bid evaluations give additional credit to have a 2.5% weighting for the suppliers that 1) have a formal environmental management system; EMS; 2) engage their value chain in water risk and climate change strategies; 3) set sustainability goals or targets; and 4) consider a lifecycle perspective in products /services. For example, a project critical to the expansion of APS operations has incorporated supplier environmental sustainability maturity questions to develop a better understanding of opportunities to measure environmental impacts.

Impact of engagement, including measures of success
APS defines success in two ways: a year over year improvement in performance across the key performance indicators and increased engagement with suppliers. Successful supplier discussions have led to a number of improvement opportunities incorporating sustainable best practices into some of our construction projects. We define success as an average of 6 percent year on year increase in suppliers who have climate-related initiatives in place. In 2016, two years before we started our climate-related supplier engagement strategy, we found that only 20percent of our suppliers had implemented climate-related controls and improvement plans. However, in 2021, survey results revealed that almost 85% of our key suppliers have implemented controls, improvement plans and measurement processes to address key environmental priorities such as greenhouse gas emission reduction, up from 65% in the prior year. In addition, 75% of our key suppliers report on key issues and progress towards goals regarding environmental issues. From the information gathered from the surveys, APS is able to develop continuous improvement opportunities to incorporate sustainable practices into some of our construction projects as well as in improving our strategies for achieving our emissions reduction goals. APS recognizes exceptional supplier performance by hosting a Key Supplier Forum and Awards. Success stories are celebrated through our Supplier Excellence awards nomination process, and awards are presented in five categories: Performance, Customer Service, Value-Added Relationship, Safety and Environmental Sustainability. To qualify for these awards, suppliers must excel in each of these categories. While APS is a huge proponent of supplier recognition, due to COVID and its impacts, APS chose to cancel the 2021 yearly supplier excellence awards in which environmental sustainability is a key criteria in the evaluation of an award as well as an award category in of itself.

Comment

C12.1b

(C12.1b) Give details of your climate-related engagement strategy with your customers.

Type of engagement & Details of engagement

Education/information sharing	Share information about your products and relevant certification schemes (i.e. Energy STAR)

% of customers by number

100

% of customer - related Scope 3 emissions as reported in C6.5

0

Please explain the rationale for selecting this group of customers and scope of engagement

APS engages with 100% of our customers through messaging on our website, monthly newsletters (printed and email), emails, social media, trade allies, sponsorships and advertising in order to give all our customers the opportunity to achieve energy savings and greenhouse gas (GHG) emission reductions as all customers are eligible to participate in our programs. Technologies such as rooftop solar, smart thermostats and energy efficiency measures have given customers more power to control their energy usage and potentially reduce their costs and GHG emissions. As more emerging technologies, such as energy storage devices, become commercially viable, they will continue to change how customers interact with us. By being proactive and working with our customers to identify and respond to their changing needs, we remain well positioned to deliver value. As part of this effort in 2021, APS continued its online Marketplace site that reaches customers digitally and provides access to educational information, APS rebates and special discounts on energy efficient devices and appliances. Through our Take Charge AZ program, we will install and own EV charging equipment at various workplace, fleet and multifamily communities, with over 60 sites and 250 plugs energized in 2021. This has enabled charging at businesses, workplaces and municipalities within APS service territory.

Impact of engagement, including measures of success

There are various ways to measure success of messaging, but the most successful measurement for knowing we have reached our customers is when they participate in our programs. This means our customers have not only become aware of the program through our messaging, but also they have acted to potentially reduce their energy use and GHG emissions. In 2021, the energy efficiency program focused on educating customers on energy management best practices and helping them make informed buying decisions. This was done through traditional marketing channels and free, onsite energy assessments for customers interested in learning how their facility uses energy. Our energy efficiency program effectiveness is measured through a third-party and is part of our Measurement Evaluation and Verification (MER) process. In 2021, the online marketplace was used to educate and promote many of our demand-side management measures included those in the residential homes program. We measure success in program marketing and awareness through increases in program participation and the implementation of energy efficiency measures. One example of success was our residential homes program, the adoption of energy saving devices and building or equipment energy saving measures implemented for customers in 2021 increased by 34% compared to 2020. We also measure success through progress towards achievement of our demand side management targets. Overall, our program resulted in 319,328 MWh of energy savings for our customers in 2021, which is 95.4% of our savings goal.

C12.2

(C12.2) Do your suppliers have to meet climate-related requirements as part of your organization's purchasing process?

No, but we plan to introduce climate-related requirements within the next two years

C12.3

(C12.3) Does your organization engage in activities that could either directly or indirectly influence policy, law, or regulation that may impact the climate?

Row 1

Direct or indirect engagement that could influence policy, law, or regulation that may impact the climate

Yes, we engage directly with policy makers
Yes, we engage indirectly through trade associations
Yes, we engage indirectly by funding other organizations whose activities may influence policy, law, or regulation that may significantly impact the climate

Does your organization have a public commitment or position statement to conduct your engagement activities in line with the goals of the Paris Agreement?

Yes

Attach commitment or position statement(s)

See page 6 of Clean Energy Commitment.
20-APS-0173-Clean-Energy-Commitment-Report_DIGITAL_FINAL.pdf

Describe the process(es) your organization has in place to ensure that your engagement activities are consistent with your overall climate change strategy

The company regularly engages externally with our customers, communities, industry participants and regulators on a variety of issues including the strategies necessary to achieve our long-term strategic plan, priority sustainability issues, and resource planning priorities to serve our customers in the short and long term. These strategies and priorities are aligned align to our overall climate commitment and vetted through Executive and Board of Directors (BOD) review of our strategies, priorities, and risks and opportunities. We advocate for sound, forward-looking public policy that creates a shared value for our stakeholders. We have a public facing political participation policy addressing engagement that aligns to long-term business interests and the interests of our customers, communities and shareholders. The political participation policy highlights public engagement and decision-making and governance processes for political spending and for reporting of political contributions, in which processes both management and our BOD play important roles. The policy includes: • Sponsorship of a registered political action committee that engages in independent expenditures concerning specific candidates, initiatives, or referenda. • Participation in federal, state, and local issues through membership in trade associations which we join to represent various business and industry interests. • Promotion of the economic health of the jurisdictions we serve through our activities with chambers of commerce. • Support for charitable and non-profit organizations that support a variety of community and educational endeavors. These organizations, in turn, are at times actively involved in promoting social welfare missions to our elected leaders. • Engagement through philanthropic giving to drive greater impact through strategic programs, partnerships and grants that align with our vision.

Primary reason for not engaging in activities that could directly or indirectly influence policy, law, or regulation that may impact the climate

<Not Applicable>

Explain why your organization does not engage in activities that could directly or indirectly influence policy, law, or regulation that may impact the climate

<Not Applicable>

C12.3a

(C12.3a) On what policy, law, or regulation that may impact the climate has your organization been engaging directly with policy makers in the reporting year?

Focus of policy, law, or regulation that may impact the climate
Climate-related targets
Low-carbon, non-renewable energy generation

Specify the policy, law, or regulation on which your organization is engaging with policy makers
The Clean Electricity Performance Program (CEPP) is a policy aimed at reducing greenhouse gas emissions (GHG) in the electric power sector. Under the proposed CEPP, the U.S. Department of Energy (DOE) would issue payments to electric utilities that achieve designated annual clean electricity targets and collect payments from electric utilities that underachieve targets. The targets would cover calendar years 2023-2030 and apply to all electric utilities in the United States. Each electric utility would have an initial target reflecting its 2019-2020 average share of clean energy used for electricity generation (i.e., clean electricity). Each utility's target would increase four percentage points annually (e.g., from 25% to 29%). Utilities that do not achieve their annual target would owe payments to the federal government.

Policy, law, or regulation geographic coverage
National

Country/region the policy, law, or regulation applies to
United States of America

Your organization's position on the policy, law, or regulation
Support with major exceptions

Description of engagement with policy makers
We met directly with members of the Arizona Congressional Delegation on key elements of the legislation. In conjunction with EEI and other utilities, we also met with members of the Senate Natural Resources Committee.

Details of exceptions (if applicable) and your organization's proposed alternative approach to the policy, law or regulation
APS, the Edison Electric Institute (EEI) and other utilities advocated to help ensure that the proposed legislation recognized concerns of the utility industry in balancing the goals of providing clean, affordable, and reliable power in an environment where the industry is actively transitioning towards a clean energy economy. APS provided feedback on specific design principles. These principles addressed cost recovery, just and equitable transition for coal communities impacted by closures, cost of capital, financial, tax incentives and regulatory certainty/clarity. The key exception is the proposed CEPP did not include the cost for storage which would have significantly increased costs for our customers. Some of the key principles APS advocated for in legislation : • Provide pathways for the recovery of the cost of stranded assets that result from facility closures required to achieve a national carbon reduction goal. • Provide funding and other transition support for economic development and job retention in impacted coal communities, especially those comprised predominantly of indigenous people or other environmental justice communities. • Focus on reducing costs for electric utilities and their customers, and, where possible, create economic incentives including government financial support, for making capital readily available to electric utilities for reinvestment into clean generation that builds rate base. • Establish the framework for achieving the electric utility-specific goal, and delegate appropriate rulemaking, permitting, compliance and enforcement authority to a single agency that understands and already regulates energy markets. The DOE is best situated to lead this transition. Statutory provisions should make clear that any national carbon reduction program is the exclusive mechanism for regulating carbon emissions, to avoid duplicative regulation (e.g., Clean Air Act), yet allow for compliance measures to simultaneously satisfy consistent state regulations. • Establish a clear national carbon reduction goal specific to the electric utility industry that balances the needs for clean, affordable, and reliable energy. Upstream emissions should not be covered by any program governing the electric utility industry; emission reductions for separate industries should be addressed through separate programs (e.g., Clean Air Act) with those cost passed on to the electric utility industry through fuel prices and other expenses.

Have you evaluated whether your organization's engagement is aligned with the goals of the Paris Agreement?
Yes, we have evaluated, and it is aligned

Focus of policy, law, or regulation that may impact the climate
Mandatory climate-related reporting

Specify the policy, law, or regulation on which your organization is engaging with policy makers
In 2021, the Securities and Exchange Commission (SEC) evaluated environmental disclosure requirements. The SEC posed a set of questions for public input seeking feedback and other information to assist in assessing the materiality of climate-related disclosures, and the costs and benefits of different regulatory approaches to climate disclosure. That information was used in the development of a more comprehensive rule proposal that was issued in 2022. APS worked with EEI to respond to the questions including but not limited to: • How can the Commission best regulate, monitor, review, and guide climate change disclosures to provide more consistent, comparable, and reliable information for investors while also providing greater clarity to registrants as to what is expected of them? • What information related to climate risks can be quantified and measured? How are markets currently using quantified information? Are there specific metrics on which all registrants should report (such as, for example, scopes 1, 2, and 3 greenhouse gas emissions, and greenhouse gas reduction goals)? • What are the advantages and disadvantages of establishing different climate change reporting standards for different industries, such as the financial sector, oil and gas, transportation, etc.? How should any such industry-focused standards be developed and implemented?

Policy, law, or regulation geographic coverage
National

Country/region the policy, law, or regulation applies to
United States of America

Your organization's position on the policy, law, or regulation
Support with minor exceptions

Description of engagement with policy makers
We evaluated the initial questions regarding climate disclosure raised by the Securities and Exchange Commission and provided our feedback to the Edison Electric Institute (EEI) which is a trade organization that advocates for the electric utility industry. Our comments were incorporated and generally consistent with those of EEI and were filed with the SEC for consideration by the agency in the development of their formal rule proposal.

Details of exceptions (if applicable) and your organization's proposed alternative approach to the policy, law or regulation
No exceptions

Have you evaluated whether your organization's engagement is aligned with the goals of the Paris Agreement?
Yes, we have evaluated, and it is aligned

C12.3b

(C12.3b) Provide details of the trade associations your organization engages with which are likely to take a position on any policy, law or regulation that may impact the climate.

Trade association
Edison Electric Institute (EII)

Is your organization's position on climate change consistent with theirs?
Consistent

Has your organization influenced, or is your organization attempting to influence their position?
We publicly promote their current position

State the trade association's position on climate change, explain where your organization's position differs, and how you are attempting to influence their position (if applicable)
EEI's member companies are leading a clean energy transformation. We are united in our commitment to get the energy we provide as clean as we can as fast as we can, without compromising on the reliability or affordability that are essential to the customers and communities we serve. Today, carbon emissions from the U.S. power sector are as low as they were in 1984, while electricity use is up 72 percent since then. EEI's member companies are committed to continuing to reduce carbon emissions in our sector and to helping other sectors—particularly the transportation and industrial sectors—transition to clean, efficient electric energy. This is just the start. With investments in new technologies and the right policies in place, we can do even more to build a cleaner, stronger economy together. Together, we are delivering America's energy future.

Funding figure your organization provided to this trade association in the reporting year, if applicable (currency as selected in C0.4) (optional)
149104

Describe the aim of your organization's funding
The Edison Electric Institute is a trade association that represents all US investor-owned electric companies. EEI provides public policy leadership, strategic business intelligence, and essential conferences and forums. EEI engages on their behalf with federal and state legislators, regulators, and other policymakers through lobbying, advocacy, and regulatory proceedings, with the goal of providing customers affordable, reliable, and resilient clean energy. EEI also engages with a range of other industry stakeholders on issues related to grid reliability; cyber and physical security; mutual assistance and disaster response; finance and tax matters; and programs, services, and solutions for electricity customers. APS participates on a variety of committees and EEI led initiatives across a variety of topics and issues. In 2022, the largest component of the EEI budget is dedicated to Clean Energy initiatives.

Have you evaluated whether your organization's engagement with this trade association is aligned with the goals of the Paris Agreement?
Yes, we have evaluated, and it is aligned

Trade association
Other, please specify (Nuclear Energy Institute)

Is your organization's position on climate change consistent with theirs?
Consistent

Has your organization influenced, or is your organization attempting to influence their position?
We publicly promote their current position

State the trade association's position on climate change, explain where your organization's position differs, and how you are attempting to influence their position (if applicable)
We need deep decarbonization to hit our climate goals. Nuclear power can get us there. As our largest source of carbon-free energy, nuclear power is critical to reducing greenhouse gas emissions. Wind, solar and geothermal are on the rise, but the smartest policies will ensure these technologies complement, not replace, nuclear's clean energy production. Protecting and growing our use of nuclear technologies are important ways to dramatically reduce greenhouse gases and help us make meaningful progress to address climate change. Now is the time to do all that we can to reduce carbon emissions. The threat that climate change poses is clear: We must reduce emissions as quickly as possible across the economy to avoid it. Policymakers are working to put America in position to meet this moment and, as the largest provider of carbon-free energy around-the-clock and with new innovations on the horizon, nuclear energy is the ideal partner to wind and solar in this endeavor. In a clean energy system, wind and solar will play important roles as renewable resources. But when the sun isn't shining or the wind isn't blowing, they will need support in the form of a reliable, carbon-free electricity source like nuclear energy. Nuclear energy provides more than half of our nation's carbon-free energy. It's always available around-the-clock, a reliable part of our critical infrastructure. Carbon-free is the direction the world is headed, and thanks to the Biden administration's actions, the U.S. is preparing to lead this effort again.

Funding figure your organization provided to this trade association in the reporting year, if applicable (currency as selected in C0.4) (optional)
13402

Describe the aim of your organization's funding
Palo Verde Generating Station has been the nation's largest power producer of any kind for 30 years – all of it clean and carbon-free. As the heart of the APS generation fleet, it provides the foundation for the reliable service our customers count on. The plant is a critical asset to the Southwest, generating more than 32 million megawatt-hours annually – enough power for roughly 3.4 million households or 8.5 million people. The Nuclear Energy Institute reports that we need deep decarbonization to hit our climate goals. As our largest source of clean energy, nuclear power is critical to reduce carbon emissions. Wind, solar and geothermal are on the rise, but the smartest policies will ensure these technologies complement, not replace, nuclear's clean energy production. Protecting and growing our use of nuclear technologies are important ways to make a dent in greenhouse gases and help us make meaningful progress to address climate change. No other source, renewable or otherwise, contributes as much to meeting U.S. energy demand without emissions as nuclear. No other source, renewable or otherwise, contributes as much to meeting U.S. energy demand without emissions as nuclear.

Have you evaluated whether your organization's engagement with this trade association is aligned with the goals of the Paris Agreement?
Yes, we have evaluated, and it is aligned

C12.3c

(C12.3c) Provide details of the funding you provided to other organizations in the reporting year whose activities could influence policy, law, or regulation that may impact the climate.

Type of organization
Research organization

State the organization to which you provided funding
APS provided funding to the Electric Power Research Organization (EPRI). Founded in 1972, EPRI is the world's preeminent independent, non-profit energy research and development organization. EPRI's trusted experts collaborate with more than 450 companies in 45 countries, driving innovation to ensure the public has clean, safe, reliable, affordable, and equitable access to electricity across the globe.

Funding figure your organization provided to this organization in the reporting year (currency as selected in C0.4)

Describe the aim of this funding and how it could influence policy, law or regulation that may impact the climate
The Electric Power Research Institute (EPRI) and Gas Technology Institute (GTI) have created the Low-Carbon Resources Initiative (LCRI) to accelerate the deployment of low- and zero-carbon energy technologies required for deep decarbonization. LCRI is specifically targeting advances in the production, distribution, and application of low-carbon, alternative energy carriers and the cross-cutting technologies that enable their integration at scale. These energy carriers—which include hydrogen, ammonia, synthetic fuels, and biofuels—are needed to enable affordable pathways to achieve deep carbon reductions across the energy economy. The LCRI is focused on technologies that can be developed and deployed beyond 2030 to support the achievement of a net zero emission economy by 2050. We are participating in the LCRI in order to facilitate research and development in low carbon technologies that can help transform the industry and enable us to achieve our clean energy commitment. These technologies may be adopted as potential clean resources that may be adopted into or inform the development of regional, national, or international climate policies, targets, or regulation that apply to public utilities or energy industries.

Have you evaluated whether this funding is aligned with the goals of the Paris Agreement?
Yes, we have evaluated, and it is aligned

C12.4

(C12.4) Have you published information about your organization's response to climate change and GHG emissions performance for this reporting year in places other than in your CDP response? If so, please attach the publication(s).

Publication
In voluntary sustainability report

Status
Complete

Attach the document
2022_FINAL-Proxy.pdf
2022-Corporate-Responsibility-Report-Overview.pdf

Page/Section reference
See the CRR overview Governance - p. 29 of overview Strategy - p. 22 of overview Risks and Opportunities - p. 7, 8, 9 and 10 of overview Emission figures - p. 5, 7, 8 and 9 of overview Emission Targets - p. 7, 8, and 9 of overview Other Metrics - Environmental, social and governance metrics - p. 12, 16, 19 and 23 from overview Other - Biodiversity - p. 13 of overview

Content elements
Governance
Strategy
Risks & opportunities
Emissions figures
Emission targets
Other metrics
Other, please specify (Biodiversity)

Comment
Our Corporate Responsibility Report is a web-based report that is updated on an annual basis in April annually to reflect the prior years performance. The report is not published as a stand-alone document so is not attached. Instead an overview of the report is attached. a link to the Corporate Responsibility Report home page is provided below: Homepage https://www.pinnaclewest.com/corporate-responsibility/default.aspx Governance https://www.pinnaclewest.com/corporate-responsibility/governance/default.aspx Strategy https://www.pinnaclewest.com/corporate-responsibility/governance/business-framework/default.aspx Risks and Opportunities https://www.pinnaclewest.com/corporate-responsibility/governance/business-framework/default.aspx Emission figures - Carbon and greenhouse gas reporting https://www.pinnaclewest.com/corporate-responsibility/esg-reporting/default.aspx Emission Targets https://www.pinnaclewest.com/corporate-responsibility/environment/clean-energy/default.aspx Other Metrics https://www.pinnaclewest.com/corporate-responsibility/esg-reporting/default.aspx Other - Biodiversity https://www.pinnaclewest.com/corporate-responsibility/environment/biodiversity-/default.aspx

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Publication
In mainstream reports

Status
Complete

Attach the document
2022_FINAL-Proxy.pdf

Page/Section reference
See Proxy Governance - p. 15 and 21 throughout Strategy - p. ii, 3, 8, 10, 15, 18 and throughout Other metrics - Other executive compensation tied to carbon reduction targets - Clean MW installed metric p. 76

Content elements
Governance
Strategy
Other metrics
Other, please specify (Executive compensation tied to meeting our low carbon targets established by our clean energy commitment)

Comment
The Proxy focuses on governance related topics related to ESG performance and incentives.

Publication
In mainstream reports

Status
Complete

Attach the document
FINALARPDF03.14.22.pdf

Page/Section reference
See annual report Governance - p. 64 and throughout Strategy - p. 77 and throughout Risks and opportunities - p. 33-35, 37-38, 58-59, 63-64 Emissions targets- p. 5, 6 and throughout Other metrics - p. 77 and throughout

Content elements
Governance
Strategy
Risks & opportunities
Emission targets
Other metrics

Comment
Annual Report incorporates the company's 10K.

C15. Biodiversity

C15.1

(C15.1) Is there board-level oversight and/or executive management-level responsibility for biodiversity-related issues within your organization?

	Board-level oversight and/or executive management-level responsibility for biodiversity-related issues	Description of oversight and objectives relating to biodiversity	Scope of board-level oversight
Row 1	Yes, executive management-level responsibility	The Vice President of Transmission and Distribution Operations has governance over biodiversity issues, which are managed by the Forestry, Fire & Resource Management Department (FFRM). This team uses best practices to manage vegetation growing around our facilities and equipment—including substations, overhead power lines and poles—to ensure safe and reliable delivery of energy. APS's transmission facilities consist of approximately 5,900 miles of transmission lines and 34,100 miles of distribution lines, with almost 11,300 miles of those being overhead distribution lines. In 2021, FFRM cleared potentially hazardous vegetation from 2,451 overhead distribution miles on 257 distribution feeders and from 1,974 transmission miles on 84 transmission circuits. Our FFRM team has a dedicated staff of natural resource professionals, including foresters, arborists, biologists and archaeologists. They work to ensure we comply with the National Environmental Policy Act, the Endangered Species Act, the Bald and Golden Eagle Protection Act, the Migratory Bird Treaty Act and other applicable statutes and regulations to protect biodiversity in our service territory. In addition, a variety of operations-related environmental programs are in place to manage vegetation in and around our facilities and rights-of-way to create habitat and keep areas available to support wildfire safety.	<Not Applicable>

C15.2

(C15.2) Has your organization made a public commitment and/or endorsed any initiatives related to biodiversity?

	Indicate whether your organization made a public commitment or endorsed any initiatives related to biodiversity	Biodiversity-related public commitments	Initiatives endorsed
Row 1	Please select	<Not Applicable>	<Not Applicable>

C15.3

(C15.3) Does your organization assess the impact of its value chain on biodiversity?

	Does your organization assess the impact of its value chain on biodiversity?	Portfolio
Row 1	Please select	<Not Applicable>

C15.4

(C15.4) What actions has your organization taken in the reporting year to progress your biodiversity-related commitments?

	Have you taken any actions in the reporting period to progress your biodiversity-related commitments?	Type of action taken to progress biodiversity- related commitments
Row 1	Please select	<Not Applicable>

C15.5

(C15.5) Does your organization use biodiversity indicators to monitor performance across its activities?

	Does your organization use indicators to monitor biodiversity performance?	Indicators used to monitor biodiversity performance
Row 1	Please select	Please select

C15.6

(C15.6) Have you published information about your organization's response to biodiversity-related issues for this reporting year in places other than in your CDP response? If so, please attach the publication(s).

Report type	Content elements	Attach the document and indicate where in the document the relevant biodiversity information is located
In voluntary sustainability report or other voluntary communications	Biodiversity strategy	https://www.pinnaclewest.com/corporate-responsibility/environment/biodiversity-/default.aspx

C16. Signoff

C-FI

(C-FI) Use this field to provide any additional information or context that you feel is relevant to your organization's response. Please note that this field is optional and is not scored.

C16.1

(C16.1) Provide details for the person that has signed off (approved) your CDP climate change response.

	Job title	Corresponding job category
Row 1	Chairman of the Board, President and Chief Executive Officer, Pinnacle West Capital Corporation & Chairman of the Board and Chief Executive Officer, Arizona Public Service Company	Chief Executive Officer (CEO)

SC. Supply chain module

SC0.0

(SC0.0) If you would like to do so, please provide a separate introduction to this module.

SC0.1

(SC0.1) What is your company's annual revenue for the stated reporting period?

	Annual Revenue
Row 1	

SC1.1

(SC1.1) Allocate your emissions to your customers listed below according to the goods or services you have sold them in this reporting period.

SC1.2

(SC1.2) Where published information has been used in completing SC1.1, please provide a reference(s).

SC1.3

(SC1.3) What are the challenges in allocating emissions to different customers, and what would help you to overcome these challenges?

Allocation challenges	Please explain what would help you overcome these challenges

SC1.4

(SC1.4) Do you plan to develop your capabilities to allocate emissions to your customers in the future?

SC2.1

(SC2.1) Please propose any mutually beneficial climate-related projects you could collaborate on with specific CDP Supply Chain members.

SC2.2

(SC2.2) Have requests or initiatives by CDP Supply Chain members prompted your organization to take organizational-level emissions reduction initiatives?

SC4.1

(SC4.1) Are you providing product level data for your organization's goods or services?

Submit your response

In which language are you submitting your response?

English

Please confirm how your response should be handled by CDP

	I understand that my response will be shared with all requesting stakeholders	Response permission
Please select your submission options	Yes	Public

Please confirm below

I have read and accept the applicable Terms