Austin Energy Resource Generation Plan 2035 Workshop #4

Presented by Lynda Rife

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Agenda

I. Welcome & Introductions

II. Workshop #3 Report Out

III. Exploring Equity

IV. Lighting the Way Forward – Values, Objectives, & Key Results

V. Exploring Future Powering Options – Modeling Work

VI. What Happens Next?

VII. Final Thoughts & Closing

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Workshop #3 Report Out

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Reliability Impact: What is the impact if you lost power for the following time-periods?

Time Period	Impact to "You"	Impact to "Your Organization"
1 hour	minimal, inconvenient, annoying	loss of revenue, damage to equipment, inconvenient, could endanger our residence due to dependency on equipment
8 hours	somewhat substantial, financial impacts, can't work, painful, pharmaceuticals at risk	loss of revenue, possible loss of customers, damage to equipment, disruption to care
48 hours	financial impacts, devastating, relocate, no work	devastating, loss of revenue, damage, life-threatening

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Affordability Impact: What is the impact to you if your monthly electric bill increased by the following amounts?

Electric Bill Increase	Impact to "You"	Impact to "Your Organization"
$1 to $5 per month	minimal, inconsequential, depends, if it gets compounded	very little, modest, impactful when you look at scale, low-income already burdened
$5 to $10 per month	minimal, inconvenient, I would need to re-evaluate consumption	impactful, significant, change spending habits

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Environmental Impact: When there is a day with high smog, what is the impact?

Smog Impact	Impact to "You"	Impact to "Your Organization"
Impact Level	not affected, slightly affected, moderately affected, extremely affected	slightly affected, moderately affected, extremely affected
Impact Description	limit outdoor activities, asthma can flare, allergies get worse which impacts my ability to work and exercise, can lead to getting a sinus infection, I worry about long-term health impacts	limit outdoor activities, the medically vulnerable with asthma, COPD, allergies, and long-term health problems, may mean higher medical costs

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Prioritizing Values: A Game of Beans

Resource Planning Tradeoffs Exercise

- **Exercise Goal-** the goal of the exercise was for participants to create valuable feedback on how Austin Energy should prioritize tradeoffs among community values of Affordability, Reliability, Environmental Sustainability.
- **Resource Allocation-** using finite resources, participants created allocations to the planning values identified as an individual, and as a group.

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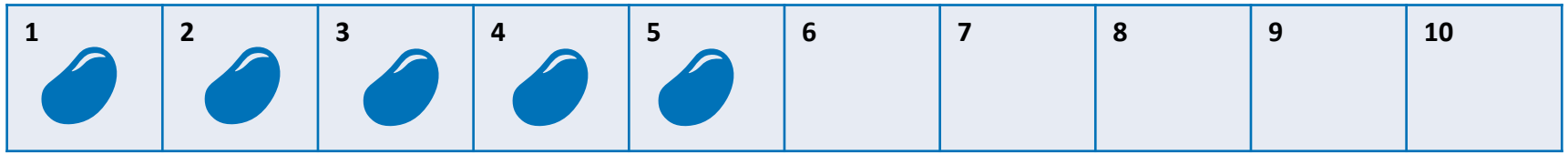
Resource Planning Tradeoffs Exercise (Individual)

My Initial Allocation

My Final Allocation

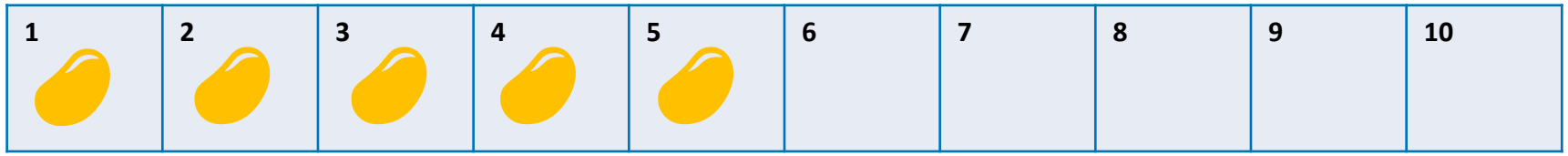
Affordability



a score from 5-10

a score from 5-10

Reliability



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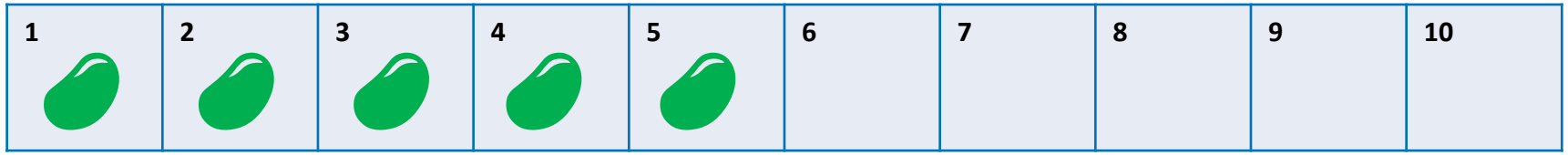
Environmental Sustainability



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A Game of Beans - Individual Allocation

Value	Allocation	Score Range
Affordability	7.91	7 to 10
Reliability	9.08	8 to 10
Environmental Sustainability	7.95	6 to 10

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A Game of Beans – Group Discussion

Group 1 – Red	Group Allocation
Affordability	8.6
Reliability	9
Environmental Sustainability	7.2

Group 2 – Blue	Group Allocation
Affordability	7.7
Reliability	9.1
Environmental Sustainability	8.1

Group 3 – Yellow	Group Allocation	Reallocation
Affordability	7.6	7.8
Reliability	9	9
Environmental Sustainability	8.3	8.2

Group 4 – Green	Group Allocation
Affordability	7.8
Reliability	9.4
Environmental Sustainability	7.8

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A Game of Beans – Individual Reallocation

Value	Original Allocation	Reallocation	Change, if any	Score Range
Affordability	7.91	7.91	Stayed the same	7 to 10
Reliability	9.08	9.21	Increased	8 to 10
Environmental Sustainability	7.95	7.82	Lowered	6 to 10

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Small Group Report Out Comments

- "Perhaps Austin Energy is not spreading the word about the great job that's being done already. We are already a national leader with regard to the work that's being done with Austin Energy."
- "With reliability, it is a life and death situation. AM or PM. There are lot of people who rely on oxygen, electric wheelchairs and other means that have become more and more manufactured/automated. The dangers can be higher the more automated we become for the disability requirements."
- "We all want the power to be on, but there's a limit to that. You don't necessarily want to say reliability at any cost because that could become unaffordable. A lack of reliability can also contribute to a lack of sustainability if people turn to polluting back-up sources like diesel generators."

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Small Group Report Out Comments Cont.

- "There are technologies and policies we can prioritize that address all three things all at once and aren't pitting affordability against reliability or environmental sustainability benefits. We want to focus on what is simultaneously affordable, reliable and environmentally sustainable."
- "Over half of the city of Austin is now renters. Renters often don't have agency over how HVAC replacements are made or how efficient their appliances are, so arguably that's an affordability impact because they often have to use more energy."

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Key Takeaways:

- **Reliability is the community's top priority across the board.**
  In the survey responses, resource allocation tradeoff exercises, and small group discussions, participants indicated that Reliability is the top community value to consider for the Resource Generation Plan.
- **Equity continues to be a major theme and discussion point throughout the workshops.**
  Participants have expressed the importance of keeping equity top of mind when considering the other community values.
- **The impacts of outages can be detrimental to vulnerable communities.**
  Low-income families, the elderly and medically compromised rely on power and automation for their homes and life-sustaining devices.
- **Austin Energy's environmental sustainability leadership should be applauded.**
  Stakeholders acknowledged Austin Energy's investments in clean energy, energy efficiency, demand response and more. Additional efforts should prioritize reliability and resilience.

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Exploring Equity

When you think of equity, who or what demographics do you think of specifically?

- **Low Income** – working poor, historically marginalized communities, unhoused, elderly, students, low-to-middle income households, children, immigrants, those dependent on public transit
- **Specific Neighborhoods** – Austin's Eastern Crescent, Black and Hispanic communities, north and south-central Austin, communities of color, non-English speakers, those who experience language and/or education barriers
- **Medically Vulnerable** – aging/elderly, those with disabilities, those who rely on electronic medical equipment or refrigeration for medication
- **Renters** – little to no control over installing energy efficient infrastructure and/or home appliances
- **Small Businesses** – affected by longer outages, limited access to back-up power resources

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Most Vulnerable Survey – Integrating Equity

Equity can mean different things to different people. We asked: If you were looking at equity, which one of the Austin Energy's mission pillars should be prioritized?

- **Reliability and resiliency – 55%**
- **Affordability – 28%**
- **Environmental sustainability – 17%**

Other:

- We should prioritize all things that help with equity.
- We can have it all, we shouldn't prioritize.

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Texas Energy Poverty Research Institute (TEPRI)

Top Themes & Takeaways - Ronnie Mendoza , Manager of Customer Assistance Programs

- TEPRI's report on energy equity and energy insecurity highlighted values which echo those already being discussed in the workshops- Energy Affordability, Energy Reliability & Resilience, Clean Energy Access (Sustainability).
- The following results show the percentage of respondents (LMI households) who ranked each value as their top priority.
  - Affordability- 50%
  - Resiliency- 27%
  - Sustainability- 17%
  - Reliability- 8%
- TEPRI offered policy recommendations
  - Enhance access to energy assistance programs- through education and outreach, programs, financial incentives
  - Address reliability/resilience- through infrastructure investments, supporting community resilience hubs, public awareness
  - Promote clean energy adoption- through education, outreach and programs

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Resource, Generation and Climate Protection Plan to 2035

Your Work in Action

Lisa Martin

Deputy General Manager and Chief Operating Officer

October 3, 2024

Austin’s New Energy Future

The 2035 Plan's Approach to Equity

What We Heard From You

Equity:

- Lots of vulnerable groups
- All are affected by different variables
- Programs are necessary but will not cover all needs

Tenets of Energy Equity

Energy Equity

Evaluating and expanding access to the services Austin Energy provides so they can reach those who need them most while understanding the impact of our operations on the community

Procedural Equity

Procedural equity focuses on ensuring fair, inclusive participation in the decision-making process.

Recognition Equity

Recognition equity aims to understand and address past and present energy inequities.

Distributional Equity

Distributional equity focuses on the just and equitable distribution of benefits and impacts in Austin's clean energy transition.

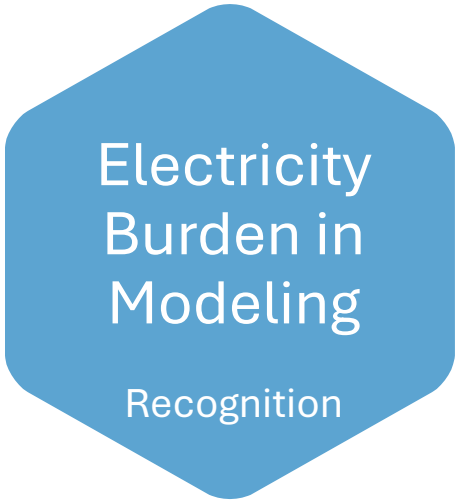
Our Energy Equity Approach

Applying an Energy Equity Lens:

- Having the knowledge, understanding and information to help make decisions
- Considering the impact of our operations on the vulnerable populations of our community as we make decisions
- Continue to grow & evolve

Energy Equity in Action

Identified workshop stakeholders with diverse & inclusive representation in alignment with the 2030 Resource Generation Plan Addendum



Taking findings from TEPRI Report, included Electricity Burden as a primary output measure for portfolio characteristics

Expansion of Customer Assistance Program to reach more qualifying households experiencing electricity burden

Questions?

Lighting the Way Forward

Values, Objectives & Key Results

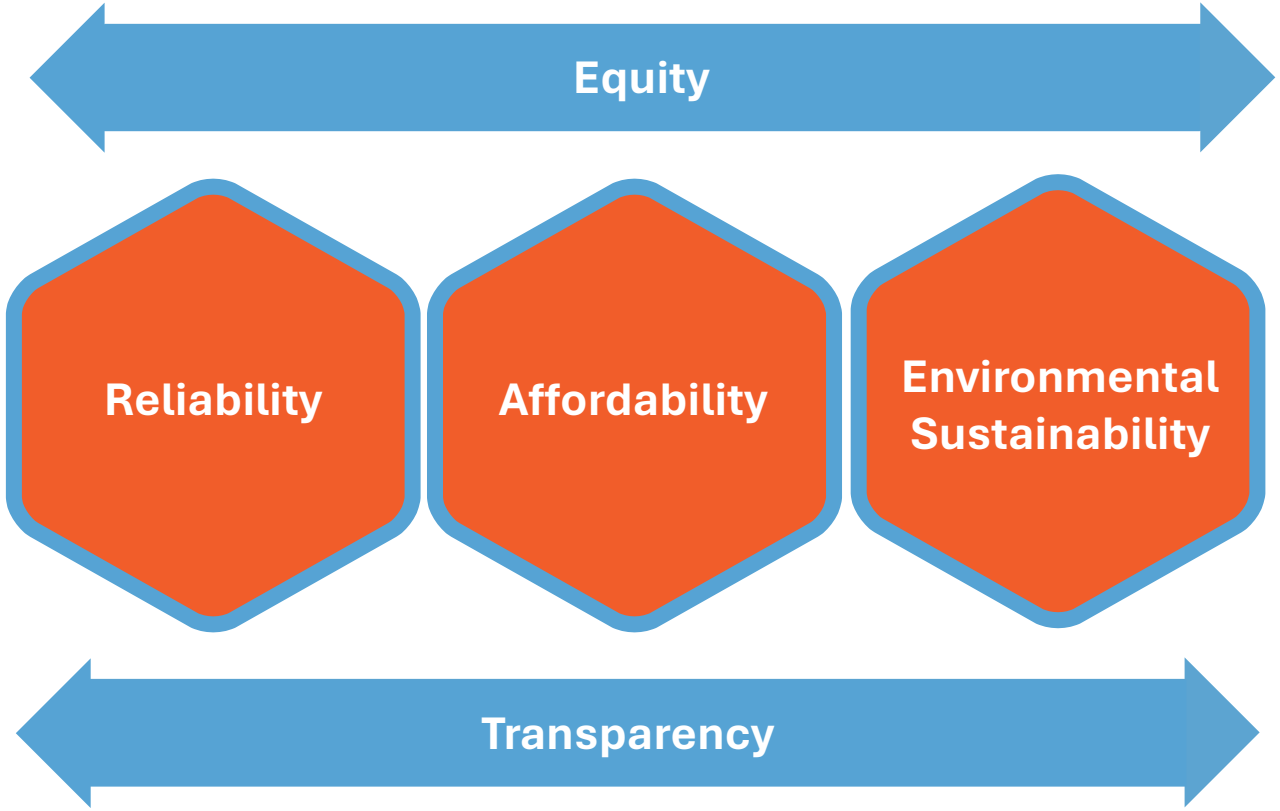
Bringing It All Together

Values	• Core principles guiding the resource generation plan
Objectives	• Actionable goals, that align with the values
Key Results	• Outcomes tied to objectives

Values drive objectives, which are executed by key results, ensuring alignment from principles to outcomes.

Values:

- Serve as the foundation of the 2035 Plan
- Affirmed and defined by the Community
- Put words to the principles or qualities that are intrinsically desirable



Value Statements: Our Guiding Light

Reliability

Providing consistent and predictable electric service that will power our community as it continues to grow

Affordability

Assessing the fairness and impacts of costs for customers while continuing to provide the public-power benefits that enhance our community's quality of life

Environmental Sustainability

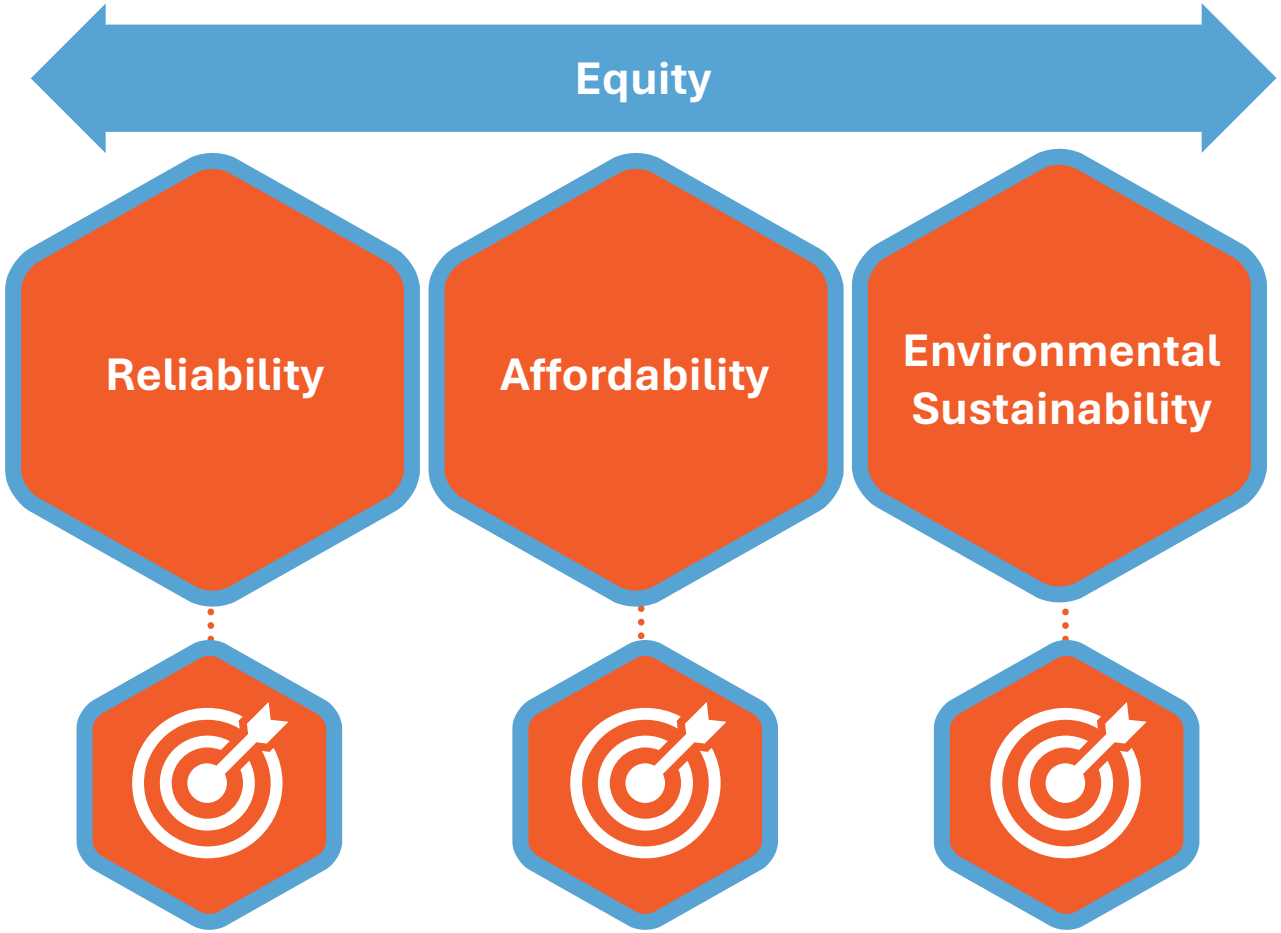
Maintaining flexibility in support of clean and innovative technologies and programs while taking a holistic assessment of the community and environmental impacts

Energy Equity

Evaluating and expanding access to the services Austin Energy provides so they can reach those who need them most while understanding the impact of our operations on the community

Objectives:

- Associate with community values
- Support community priorities
- Provide direction by aligning with values and focusing efforts



Objectives: What We Heard for Reliability

Please circle one of the draft objective statements that most accurately reflects your own thoughts. If none of the statements are adequate, please write your own.

Objective
Prioritize reliability and resilience over other values, limit unplanned outages to statewide load-shed events and short localized distribution outages from extreme weather events
Reduce the chance of extended localized outages from extreme weather but allow for a limited number of short-term unplanned outages resulting from the need for load shed within the load zone
Prioritize other community values at the expense of reliability/resiliency
Write Your Own Objective Statement

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Objectives: What We Heard for Reliability

Category	Votes	Objective
Most Aggressive	48%	**Prioritize reliability and resilience over other values, limit unplanned outages to statewide load-shed events and short localized distribution outages from extreme weather events** *Carbon free approach comes at the expense of both affordable and reliability.*
Middle-Ground	43%	**Reduce the chance of extended localized outages from extreme weather but allow for a limited number of short-term unplanned outages resulting from the need for load shed within the load zone**
Least Aggressive	0%	**Prioritize other community values at the expense of reliability/resiliency**
Write Your Own	9%	**Write Your Own:** *Prioritize other community values at the expense of reliability/resiliency. Elderly plus disability impact. Automation equals access and independence.* *Limit unplanned outages to statewide load-shed events and short localized distribution outages from extreme weather events while also reducing emissions.*

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Objectives

Combined objective for Reliability

Providing consistent and predictable electric service that will power our community as it continues to grow

Prioritize reliability and resilience over other values. Mitigate the risk of statewide & localized system outage events. Limit the exposure of vulnerable populations to outages.

Objectives: What We Heard for Affordability

Please circle one of the draft objective statements that most accurately reflects your own thoughts. If none of the statements are adequate, please write your own.

Objective
Adhere to the goal of limiting overall bill impacts to 2% per year and maintaining bills under the Texas average
Limit the impact of bill increases to our most vulnerable customers while allowing acceptable increases of greater than 2% for other customers and maintaining supportable levels of reliability and environmental sustainability
Make significant accommodations in the affordability goal to support ambitious improvements in reliability and environmental sustainability
Write Your Own Objective Statement

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Objectives: What We Heard for Affordability

Category	Votes	Objective
Most Aggressive	13%	**Adhere to the goal of limiting overall bill impacts to 2% per year and maintaining bills under the Texas average** Affordability should apply to all customers. Adhere to the 2% bill impact and make significant accommodations
Middle-Ground	70%	**Limit the impact of bill increases to our most vulnerable customers while allowing acceptable increases of greater than 2% for other customers and maintaining supportable levels of reliability and environmental sustainability** *Restructure billing to account for energy burden percentage. No one should pay more than 3-5%.* *While also reducing emissions.*
Least Aggressive	17%	**Make significant accommodations in the affordability goal to support ambitious improvements in reliability and environmental sustainability** Make significant accommodations … Limit the impact of bill increases to our most vulnerable customers while looking and working towards least cost options to support clean, reliable, resilient power.

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Objectives

Combined objective for Affordability

Affordability

Assessing the fairness and impacts of costs for customers while continuing to provide the public-power benefits that enhance our community's quality of life

Limit the impact of bill increases to the most vulnerable customers, while allowing acceptable increases of greater than 2% for other customers and maintaining supportable levels of reliability and environmental sustainability.

Objectives: What We Heard for Environmental Sustainability

Please circle one of the draft objective statements that most accurately reflects your own thoughts. If none of the statements are adequate, please write your own.

Objective
Move as quickly as possible to eliminate all direct emissions from generation operations
Look to minimize emissions from generation operations and mitigate any remaining emissions
Reduce emissions as much as possible without negatively impacting affordability or reliability
Write Your Own Objective Statement

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Objectives: What We Heard for Environmental Sustainability

Category	Vote	Objective
Most Aggressive	17%	**Move as quickly as possible to eliminate all direct emissions from generation operations** *Move as quickly as possible to eliminate all direct and indirect emissions from generation operations*
Middle-Ground	35%	**Look to minimize emissions from generation operations and mitigate any remaining emissions**
Least Aggressive	44%	**Reduce emissions as much as possible without negatively impacting affordability or reliability** *Do not jeopardize the reliability/affordability benefits that dispatchable generation sources provide.*
Write Your Own	4%	***Write Your Own**:* *Prioritize policies and technologies that reduce emissions while improving affordability and reliability.*

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Objectives

Combined objective for Environmental Sustainability

Environmental Sustainability

Maintaining flexibility in support of clean and innovative technologies and programs while taking a holistic assessment of the community and environmental impacts

Reduce emissions as much as possible and mitigate any remaining emissions, while supporting affordability and reliability.

2035 Plan Objectives

Reliability

Prioritize reliability and resilience over other values. Mitigate the risk of statewide and localized system outage events. Limit the exposure of vulnerable populations to outages.

Affordability

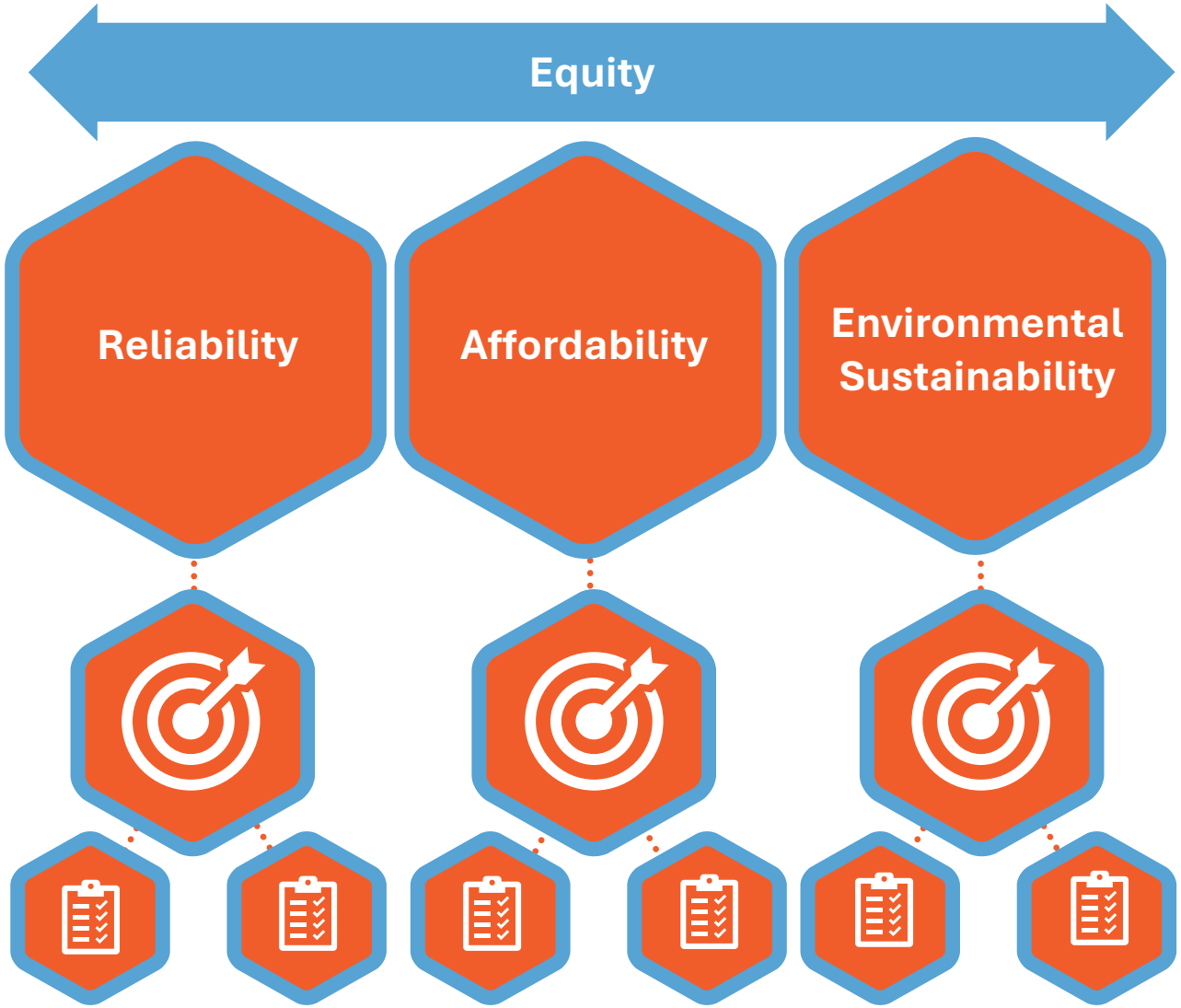
Limit the impact of bill increases to the most vulnerable customers, while allowing acceptable increases of greater than 2% for other customers and maintaining supportable levels of reliability and environmental sustainability.

Environmental Sustainability

Reduce emissions as much as possible and mitigate any remaining emissions, while supporting affordability and reliability.

Key Results:

- Outcomes tied to executing on objectives
- Formed in part from modeling results as well as conversations with Commissions, Council, and Community Stakeholders



Exploring Future Power Options

How it All Fits Together

Modeling Work

Modeling Process

Model Inputs & Assumptions

- Load Forecast
- Fuel Costs
- Technology Costs
- Emission Factors
- Economic Values

Portfolios

"Technology Mixes"

- **Portfolio A**
  - __ MW Solar
  - __ MW Storage
  - __ MW DR
- Portfolio B
- Portfolio C
- Portfolio D
- Portfolio E
- Portfolio F
- Portfolio G

Scenarios

"Future Worlds"

- Normal Conditions
- Extreme Weather
- Local Congestion
- Regulatory Change

Sensitivity Analysis

"What if?"

- High Load Growth
- Fuel Cost Changes
- Generation Retirement

Output Results

- Levelized Cost
- Bill Impact
- Emissions
- Reliability Risk Hours
- Liquidity Risk
- Energy Burden

Key Takeaways for the Resource Generation Plan

ERCOT 101

Required

Austin Energy is bound to the ERCOT market.

Tradeoffs

Like any market, the ERCOT market has benefits and risks

Future Options

Decisions we make now affect the future tools available to maximize benefits and minimize risks in the ERCOT market

Modeling Results Inform Our Future Options

Required

Austin Energy is bound to the ERCOT market.

Tradeoffs

Like any market, the ERCOT market has benefits and risks.

Modeling Outputs Results

- **Levelized Cost**
- **Bill Impact**
- **Emissions**
- **Reliability Risk Hours**
- **Liquidity Risk**
- **Energy Burden**

Understanding the tradeoffs of the tools and technologies analyzed.

Future Options

Decisions we make now for the Resource Generation Plan affect the future tools available to maximize benefits & minimize risks in the ERCOT market.

Final Thoughts

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Final Discussion Questions

- What are your biggest takeaways as you've gone through the workshops? What have you learned? What are your thoughts on the process?
- What do you want Austin City Council to know as they are developing the Resource, Generation and Climate Protection Plan to 2035?

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Thank You!

On behalf of the Austin Energy team, we want to thank you all for lending us your time, engagement, perspectives and feedback over the last few months in these workshops. Your feedback is crucial to informing the Resource, Generation and Climate Protection Plan to 2035 and ensuring it reflects the values and priorities of Austin's diverse communities. Your engagement will help shape Austin's energy future.

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What Happens Next

Next Steps and How to Get Involved

- Inform and educate the organization and communities you represent of what you've learned and the work you've done in these workshops.
- Opportunities to provide public comment to the Electric Utility Commission (EUC) & City Council.
- You all will receive periodic email updates on the Resource Generation Plan 2035 development process, including a copy of the final draft to review.

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Thank You!

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