

Power Supply Planning CAWCD Board of Director's Workshop

June 24, 2014
9:00 a.m. – 4:00 p.m.



Agenda

- 9:00 Introduction and objectives – Pam Pickard/Carol Zimmerman
- 9:15 Review agenda – Ed Means
- 9:20 Introduction to scenario planning – Ed Means
- 9:40 Social responsibility concept exercise
- 10:15 Break
- 10:30 Introduction of scenarios
- 10:45 Scenario A: “*Timing Energy Diversification*”
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Agenda

9:00 Introduction and objectives – President Pam Pickard

- Welcome
- Participants
- Context – Carol Zimmerman
- Facilitator introduction

Context

- 2010 Strategic Plan: Power Generation
- 2011 Integrated Strategic Plan
- Top 5 Issues from Power Retreat

2010 Strategic Plan: Power Generation Objectives & Action Plans

Maintain existing generation resources until appropriate alternatives are available	Aggressively oppose all legislative, legal and regulatory threats to NGS
	Support renewal of NGS land, water, participation and coal agreements
	Effect Hoover reallocation for Arizona through federal legislation or Western Area Power Administration allocation process
Develop new, reliable, sustainable, cost-effective generation resources	Investigate feasibility of distributed generation
	Explore possible partnerships with municipalities, utilities, merchants and public or private parties to develop new generation resources
	Identify and evaluate short-term/back-up generation resources
	Evaluate alternative generation resources including renewables
	Prepare for eventual replacement of NGS

2011 CAP Integrated Strategic Plan

- P10: Develop a long-term energy strategy and integrated resource plan that includes a diversified and sustainable supply portfolio. Coordinate with the water IRP.

Top 5 Issues from Power Retreat

- 1) CO₂ Regulations & Climate Change
- 2) Partnership alternatives & opportunities
- 3) Social responsibility
- 4) Diversification
- 5) Ongoing evaluation & education

Workshop Objectives

Conduct scenario planning to address three key policy questions:

1. When do we diversify (fuels & geographically)?
2. What kind of partnering is required/desirable?
3. What kind of process do we need to continue to be informed?

Facilitator Ed Means

- 34 years of experience working in water utilities
- 18 yrs with MWD - Chief of Ops/Acting General Manager
- Consulting for last 15 yrs
- Over 125 publications in professional journals
- Scenario Planning for over a dozen organizations
- California Energy Commission/WRF Energy/Water Research Needs Plan

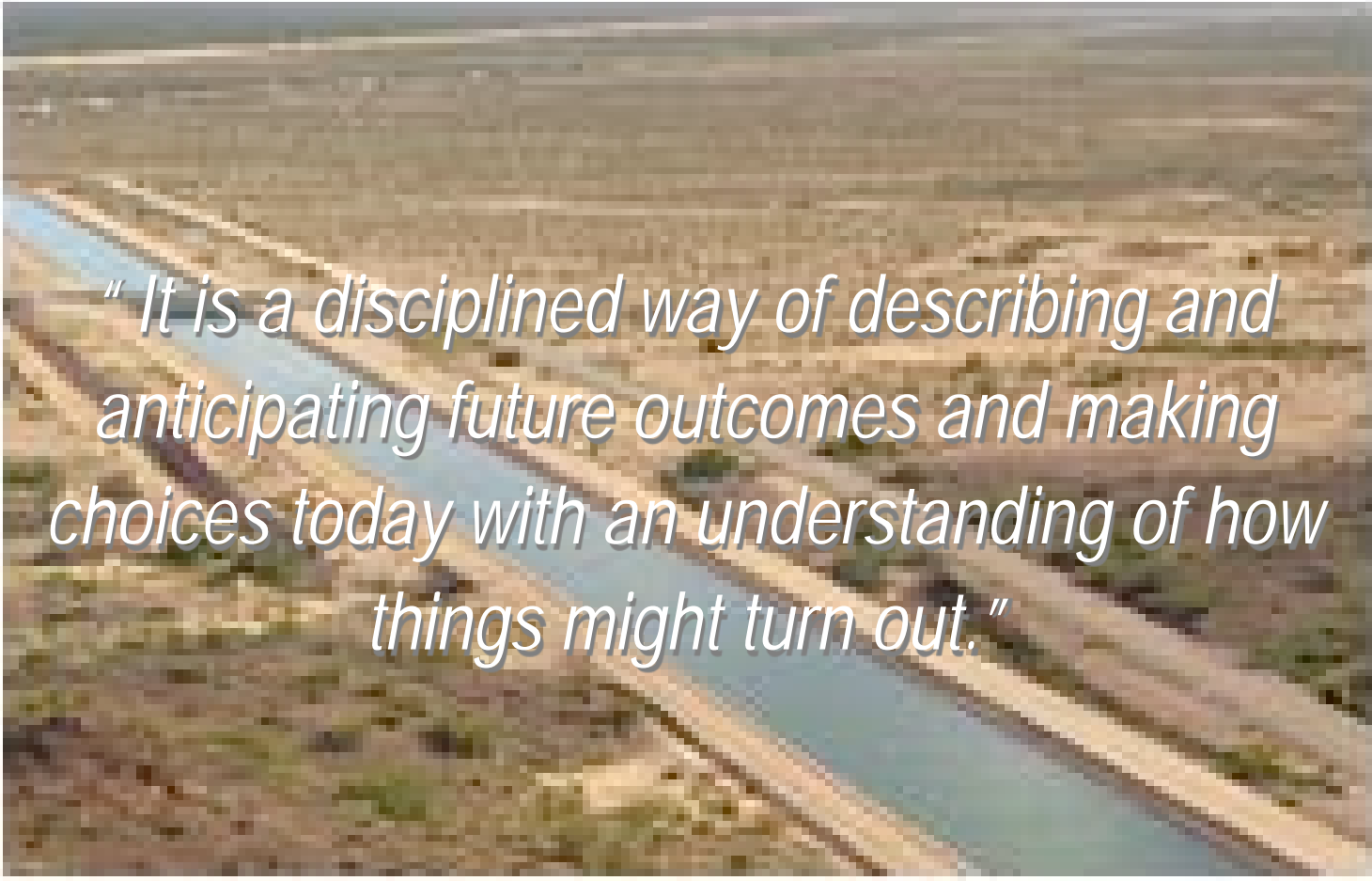
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Introduction to Scenario Planning

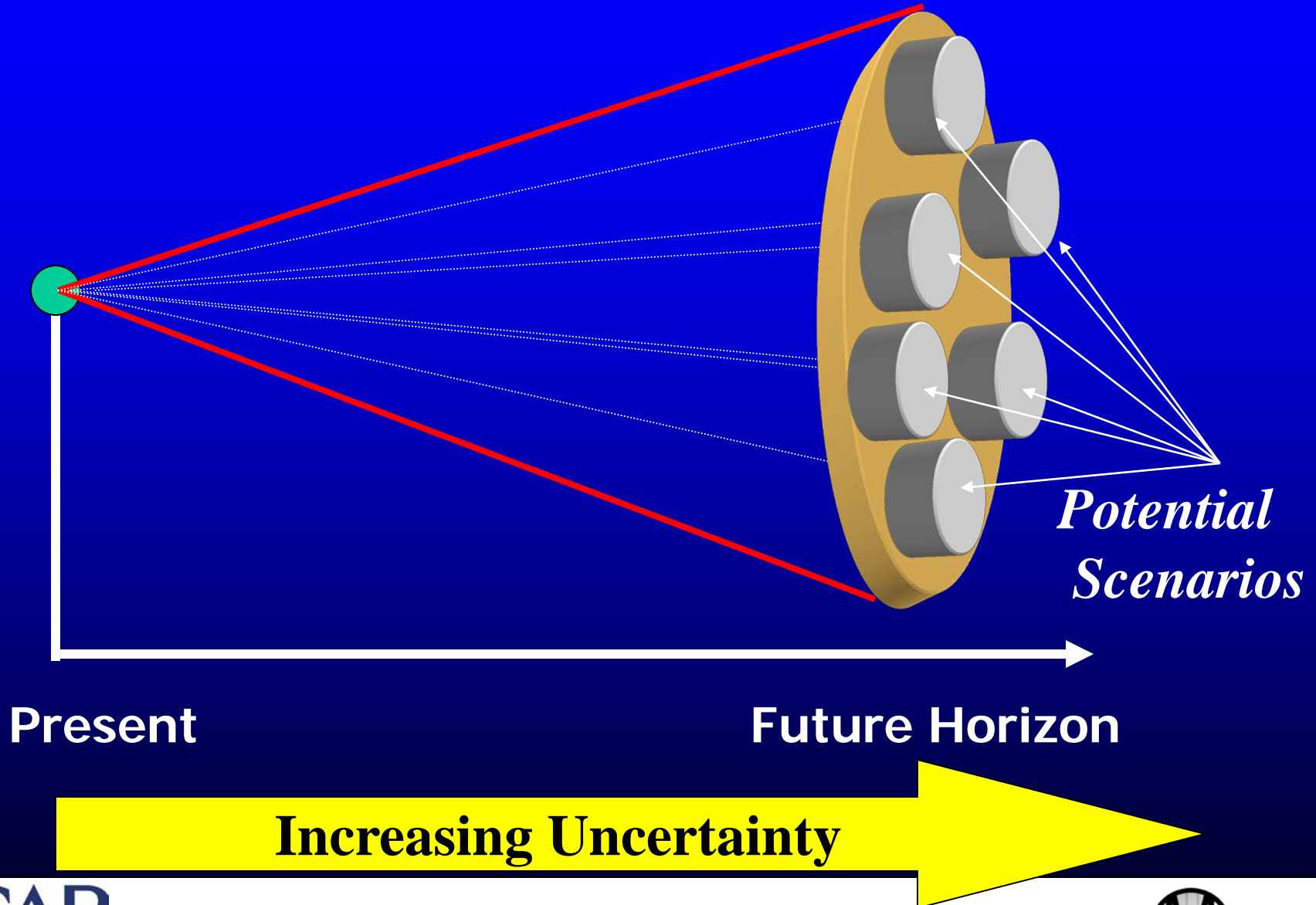
An aerial photograph of a dry, brown riverbed. A distinct blue channel, likely representing water or a planned waterway, runs diagonally from the bottom left towards the top right. The surrounding landscape is arid and brown.

"It is a disciplined way of describing and anticipating future outcomes and making choices today with an understanding of how things might turn out."

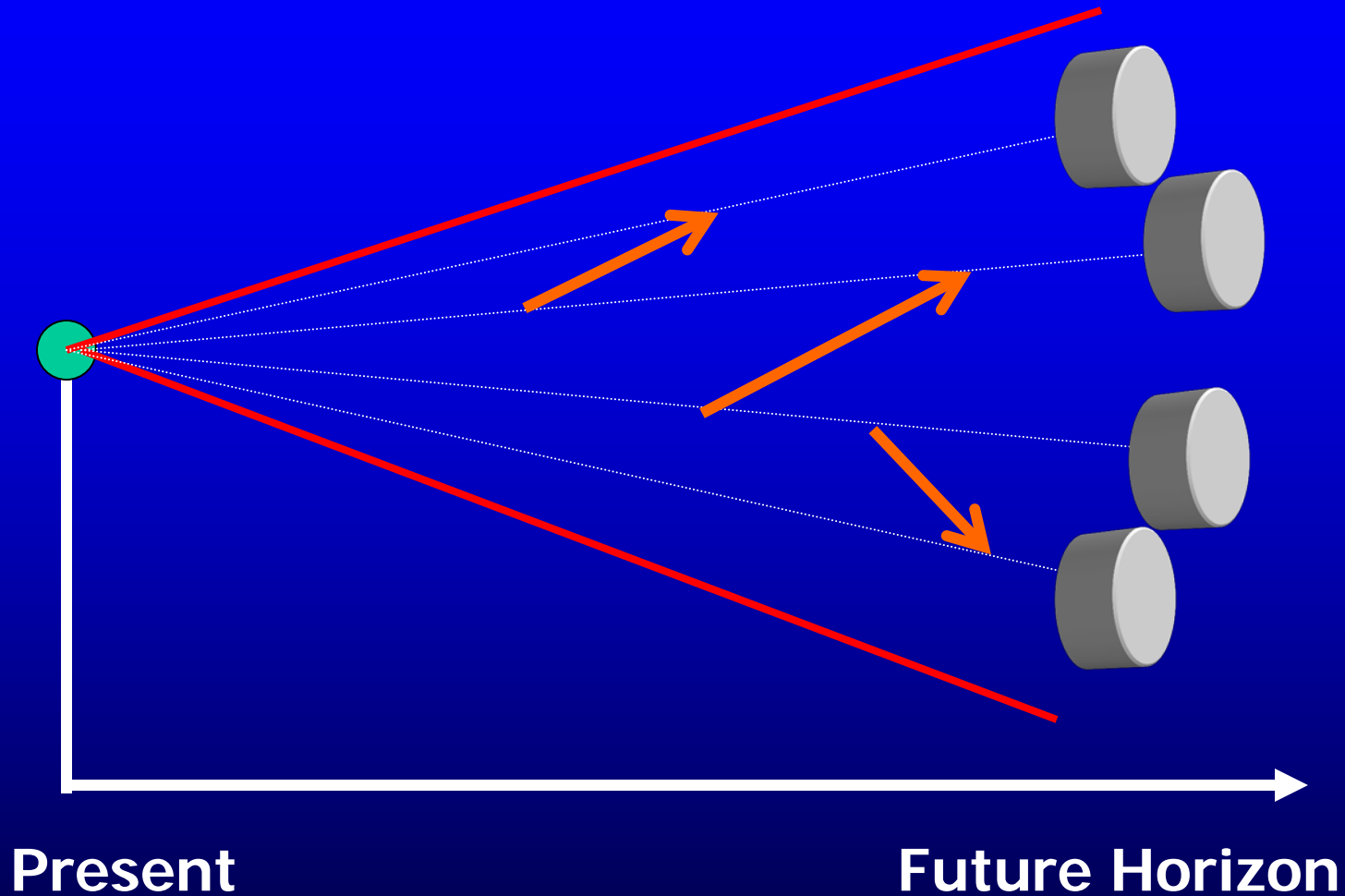
Scenario Planning

- Objective - Make decisions that would be most beneficial *no matter how the future unfolds*.
- Adaptation of classic military intelligence methods.
- Military analysts generate simulation games for policy makers. The games combine known facts about the future, w/ plausible alternative social, technical, economic & political trends which are key driving forces.

Cone of Relative Certainty



Cone of Relative Certainty

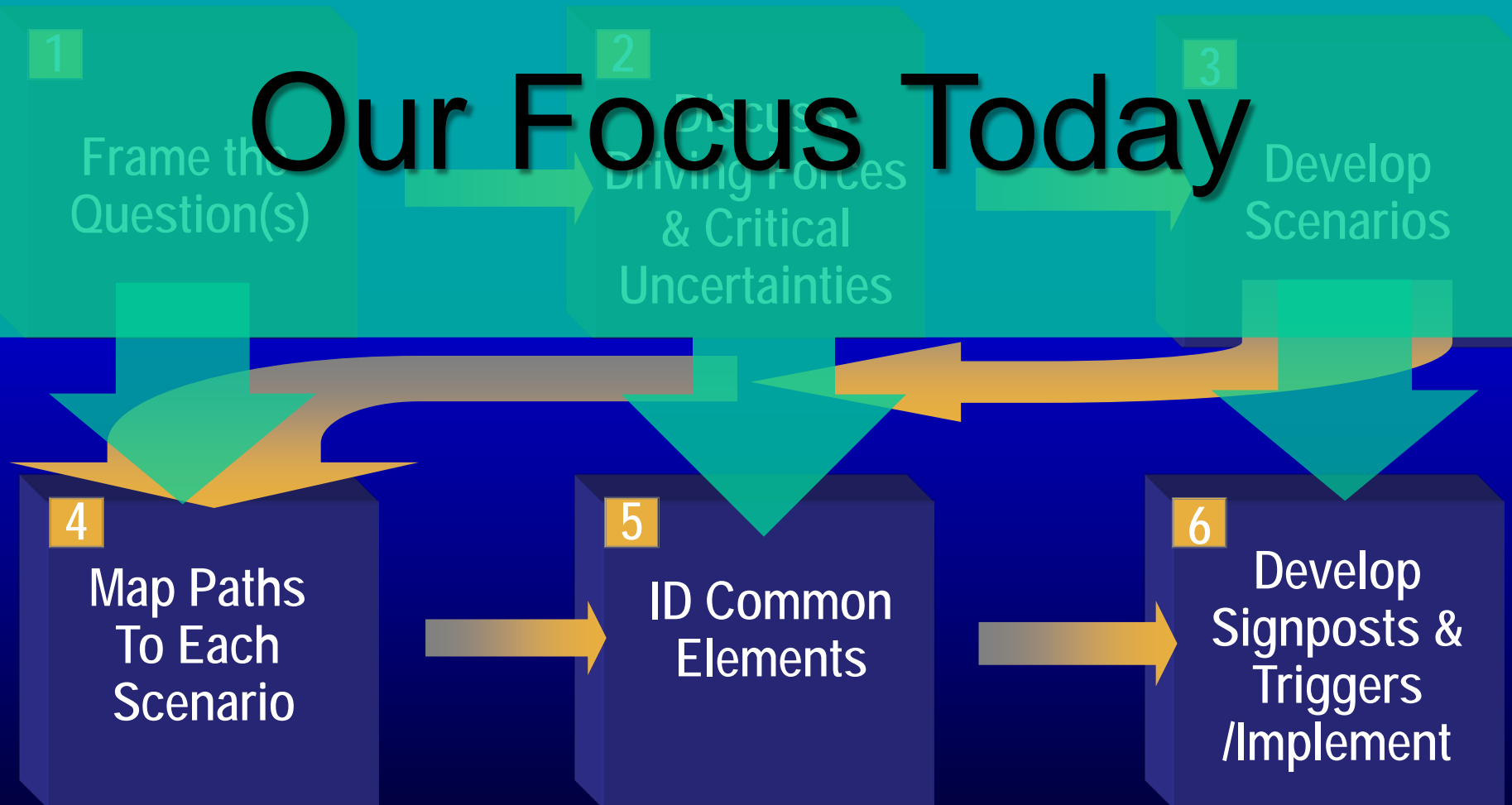


Benefits of Scenario Planning

- Helps us understand the uncertainties that lie before us, and what they might mean
- It helps us “rehearse” our responses to those possible futures
- And it helps us spot them as they begin to unfold
- Creates alignment around a strategic plan
- Allows key managers to respond quickly

Scenario Planning Process

Our Focus Today

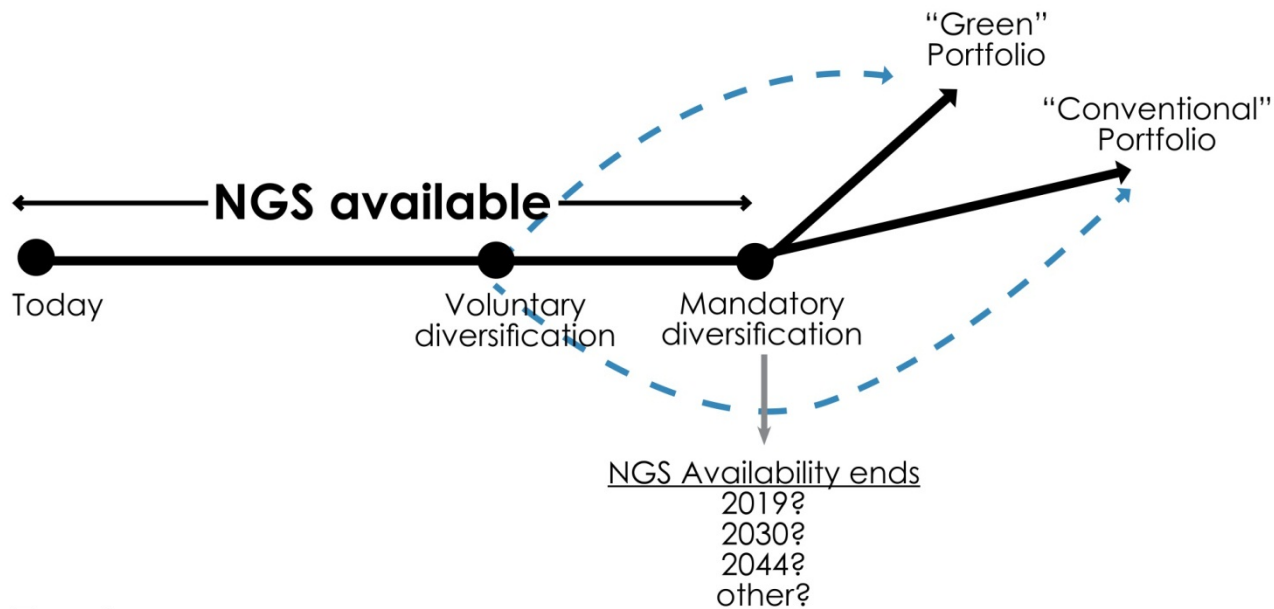


Driving Forces/Critical Uncertainties for CAP

1. Regulatory activity – Coal & NGS availability
2. Washington DC politics
3. Cost/ Public willingness to pay
4. Consumer environmental attitudes
5. Economy
6. Population growth
7. Energy demand growth
8. Climate change
9. Drought
10. Litigation
11. Energy variability

Why We Might Diversify

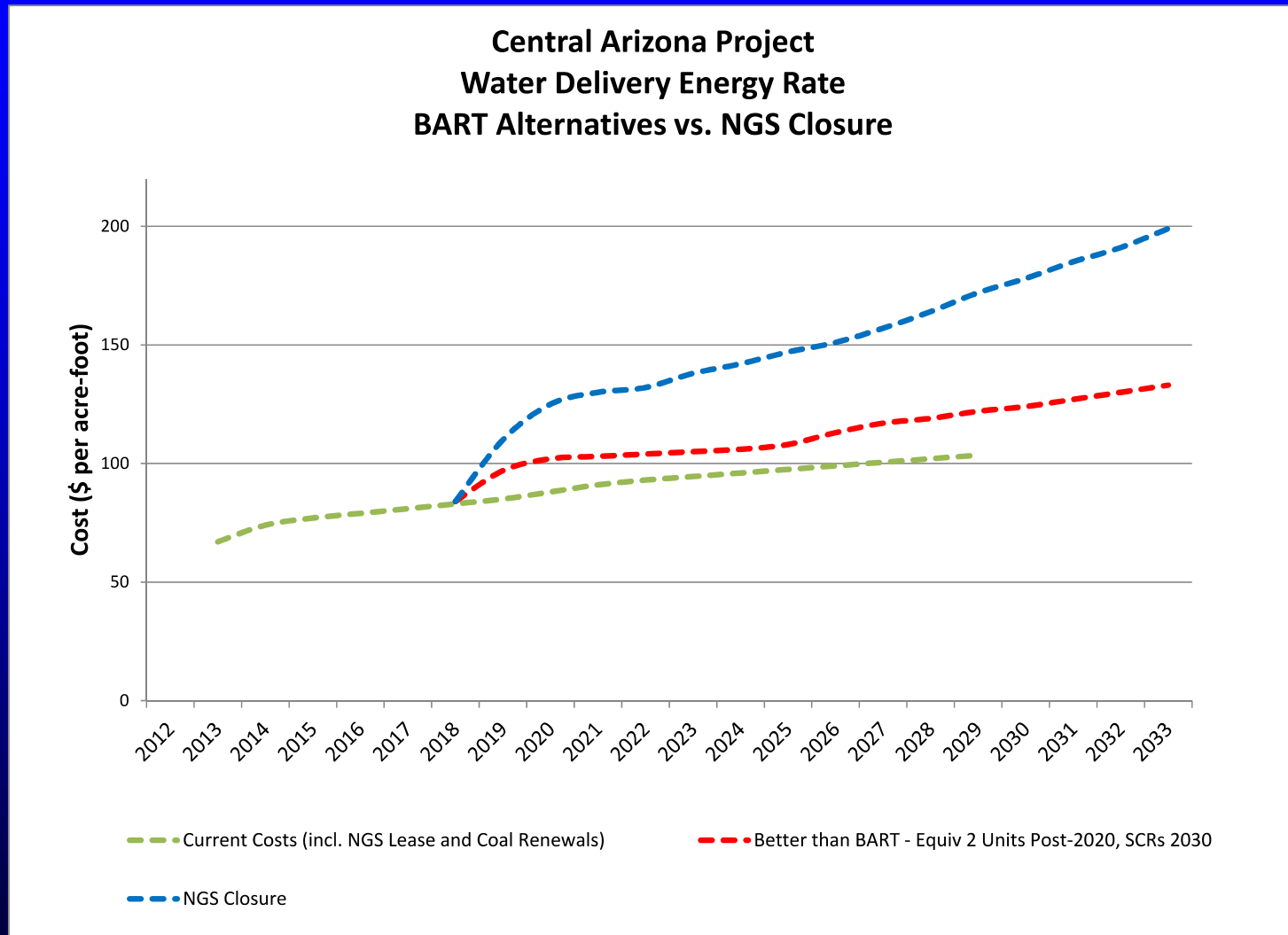
NGS Timeline



Factors:

- » Cost of alternatives
- » Regulation of coal/carbon

NGS Repayment Issues



Key Uncertainties for CAP?

2

Discuss
Driving Forces
& Critical
Uncertainties

1. NGS or No NGS
2. Cost / Public willingness to pay
3. Social responsibility

Workshop Objectives

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Social Responsibility

Exercise: What Does Social Responsibility Mean to You?

Use sticky notes to capture and post your perspective

Social Responsibility

For Purposes of Today's Workshop Social Responsibility is:

“Consideration of power generation alternatives different than the least-cost alternatives (status quo)”

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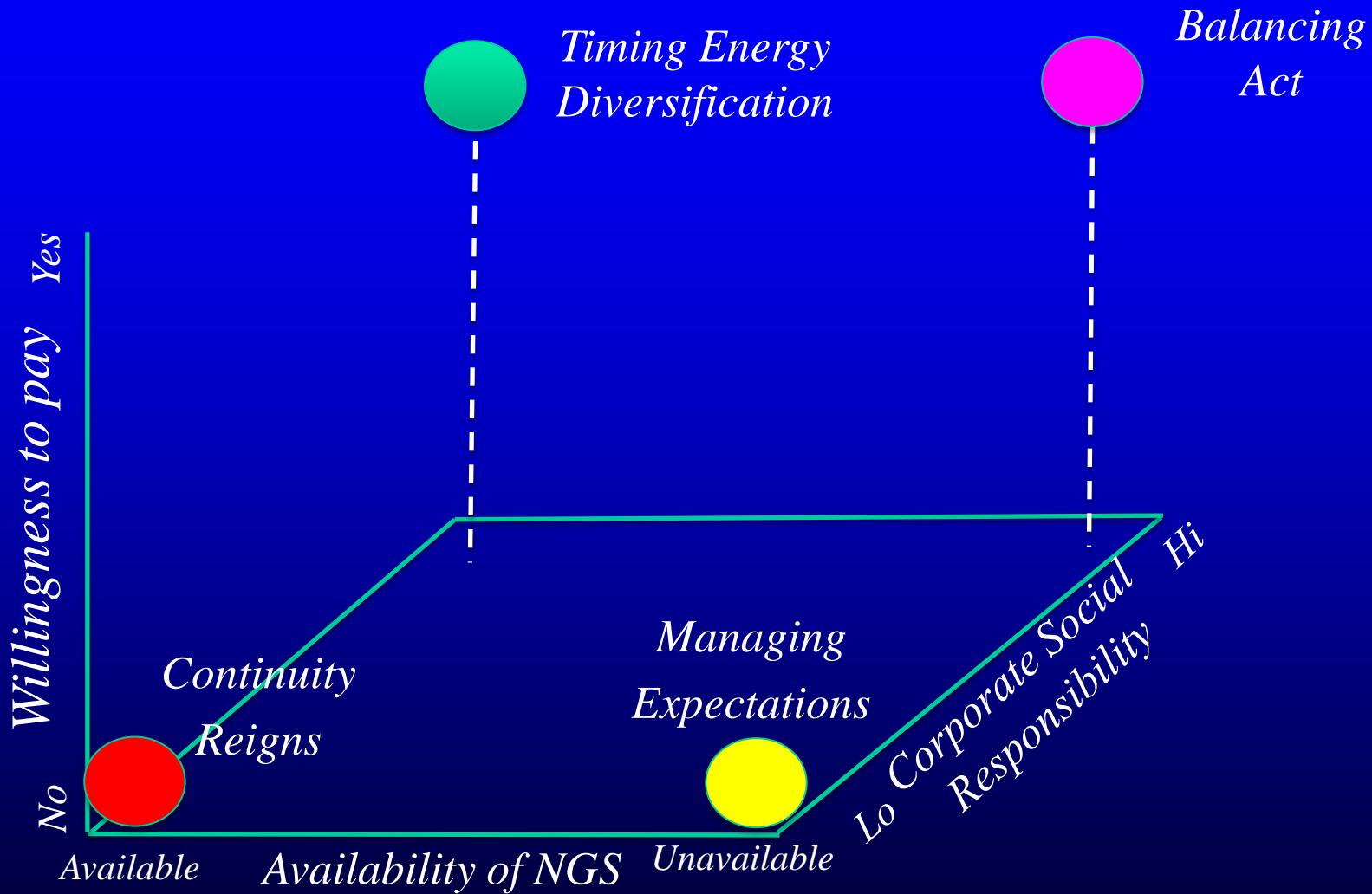
Scenario Planning Discussion Guidelines

- Not trying to identify every scenario
- We are not trying to debate content of scenarios
- Not making decisions
- Think long term - >10 yrs or the tendency is to extrapolate from where we are now
- Think about CAP as a whole
- Open discussion / Keep an open mind

Four Possible Scenarios

<u>NGS</u>	<u>Willingness to Pay</u>	<u>CSR</u>	<u>Scenario</u>
Available	Yes	High	<i>Timing Energy Diversification</i>
Available	No <i>or</i>	Low	<i>Continuity Reigns</i>
Unavailable	Yes	High	<i>Balancing Act</i>
Unavailable	No <i>or</i>	Low	<i>Managing Expectations</i>

Scenarios



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Scenario A: Timing Energy Diversification

Scenario Description

- The Navajo Generating Station remains available
- Economy is good
- Public increasingly views investments in sustainable energy as a positive

Implications

Signposts

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Scenario B: Continuity Reigns

Scenario Description

- The Navajo Generating Station is available
- Economy remains sluggish
- Population growth remains essentially flat
- Public trust in government remains near historic lows
- The public supports environmental sustainability but, given the economy, is not willing to pay to diversify away from the Navajo Generating Station

Implications

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Scenario C: Balancing Act

Scenario Description

- The Navajo Generating Station is unavailable
- Economy is good
- Public trust in government is rising
- Quality of life issues in the CAP service area have received a lot of attention in the media (traffic, air quality, climate change, water reliability, etc.)
- The public is willing to pay to diversify away from the Navajo Generating Station

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Scenario D: Managing Expectations

Scenario Description

- The Navajo Generating Station is unavailable due to regulatory action
- Population growth remains relatively flat
- Energy usage in the CAP service area is rising as climate change drives higher cooling costs
- Economy remains sluggish
- The public is NOT willing to pay to diversify away from the Navajo Generating Station

Implications

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Example Next Steps

- Document results of the workshop (common elements, signposts, etc.)
- Develop plan to address key findings?
- Generate periodic update on costs of different generation options?
- Social responsibility policy development?
- Periodic review of where we are with respect to signposts?

Adjourn

