INVESTING IN A CLEAN FUTURE

Austin Energy's Resource, Generation and
Climate Protection Plan to 2020 Update

March 2014

INVESTING IN A CLEAN FUTURE
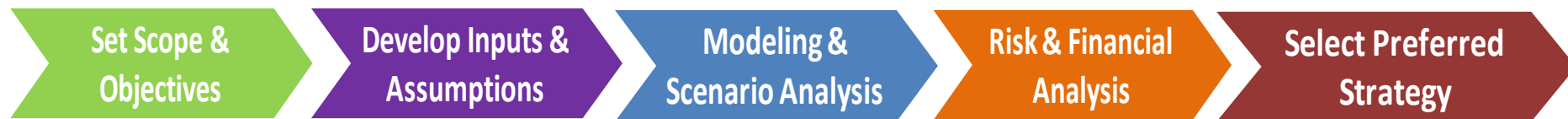
Public Participation Update to EUC & RMC

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Vice President, Resource Planning and

Energy Market Operations

| Set Scope & Objectives | Develop Inputs & Assumptions | Modeling & Scenario Analysis | Risk & Financial Analysis | Select Preferred Strategy |

- Held 3 stakeholder input meetings
  - ✓ Tuesday 2/25 – 10 a.m. to noon
  - ✓ Tuesday 2/25 – 6 to 8 p.m.
  - ✓ Thursday 2/27 – 1 to 3 p.m.
- 102 total stakeholders attended meetings
- Requested feedback from stakeholders
  - ✓ Presentation + Q & A (Video taped)
  - ✓ Interactive booths : deep dive with subject matter experts
  - ✓ Note cards & online Q&A
  - ✓ Resource allocation excercise
  - ✓ Online survey
- Today's EUC Meeting – summarize feedback

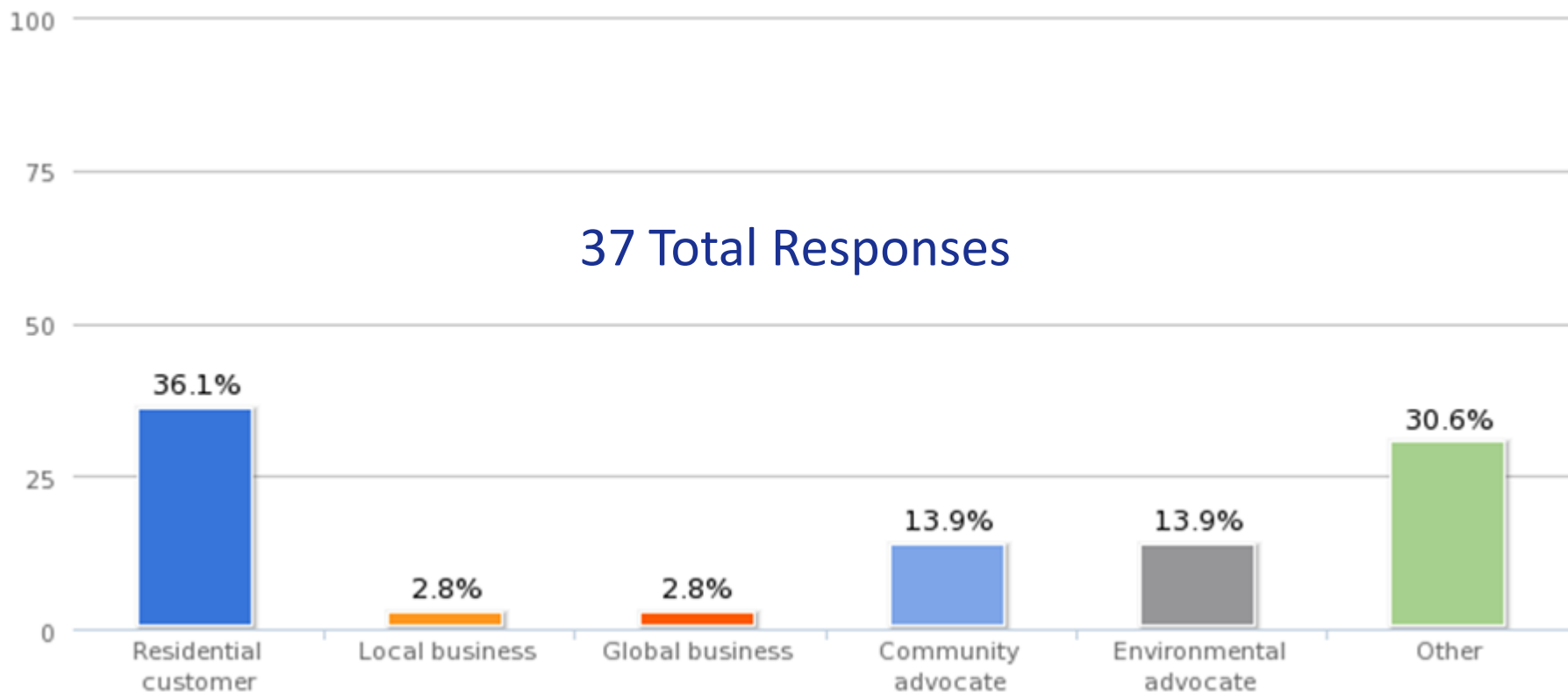| % of Responses	Target Goal Year	Avg. Desired Renewables
38%	2020	66%
41%	2025	69%
11%	2030	66%
5%	2040	83%
5%	2050	18%
100%		

Notes:

Based on 37 responses

Target years grouped for summary purposes

Who do you represent when attending the Stakeholder meeting?

37 Total Responses

- Residential customer: 36.1%
- Local business: 2.8%
- Global business: 2.8%
- Community advocate: 13.9%
- Environmental advocate: 13.9%
- Other: 30.6%

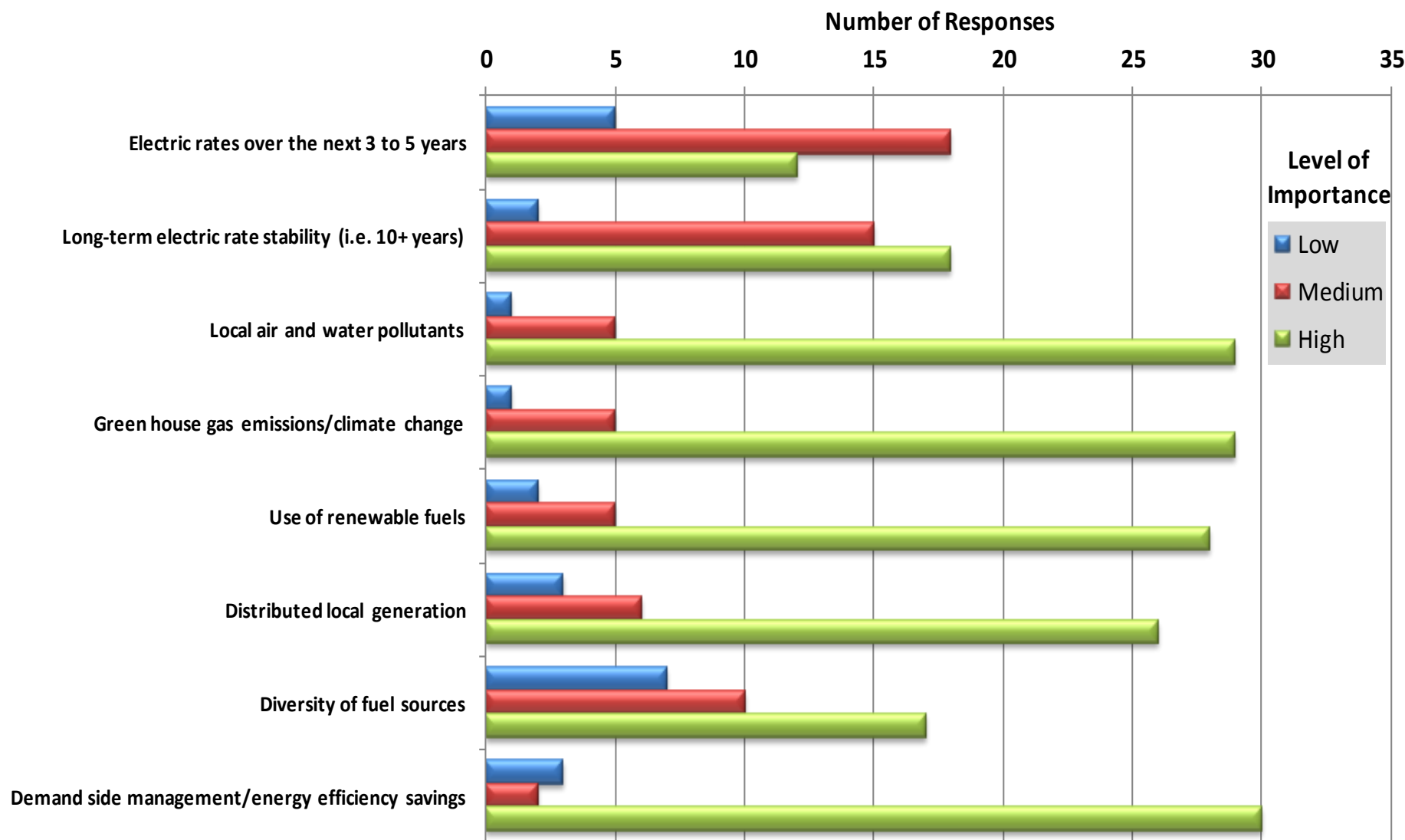**Other = COA Commissions/UT/Commercial Property/Community Member etc.**

- Renewables, Demand Side Management, greenhouse gas emissions and reducing pollutant received most favorable scores

- Short-term and long-term rate importance received only a few high scores

- Open ended question response:
  - Support 50% renewables for 2020 and 60% by 2024 (half local and 1/4 customer controlled by 2020) and a 10% solar goal by 2024
  - AE's generation and customer consumption are not tied together
    - AE can be 100% green but ERCOT carbon emissions would continue to increase
  - Simplify complex policy options now and moving forward
    - AE should have strategic environmental goals over time but allow the utility to have discretion for execution to meet goals
    - Set targets and back load rollout or adoption if required
    - Change AE business model so selling less power doesn't jeopardize financial stability
  - Don't force price increase on low-income customers

- Customer willing to pay on average per month
  - To be an early adopter: $8 median (Ranges from $0 to $300)
  - CO_2 Emission reductions: $9 median (Ranges from $0 to $200)
  - Local Solar vs West Texas Solar: $2 median (Ranges from $0 to $200)

Power Generation Issues — Number of Responses by Level of Importance (Low, Medium, High)

Issue	Low	Medium	High
Electric rates over the next 3 to 5 years	5	18	12
Long-term electric rate stability (i.e. 10+ years)	2	15	18
Local air and water pollutants	1	5	29
Green house gas emissions/climate change	1	5	29
Use of renewable fuels	2	5	28
Distributed local generation	3	6	26
Diversity of fuel sources	7	10	17
Demand side management/energy efficiency savings	3	2	30

- **Environmental & Climate Change**
  - ❑ Carbon pricing
  - ❑ Impact of fracking & methane regulation
  - ❑ Coal ash regulations
  - ❑ Community impacts on running FPP
  - ❑ Emergency response mode for climate change

- **Scenarios**
  - ❑ Expand goals with more wind & solar
  - ❑ Increase Demand Side Management
  - ❑ Compressed Air Energy Storage & other storage technologies
  - ❑ Smaller gas plant or built in multiple phases
  - ❑ Distributed generation

- **Education & Clarification**
  - ❑ Better understanding of the ERCOT market
  - ❑ Modeling of Demand Side Management in load forecast
  - ❑ Emissions and dispatch of Decker Creek Power Station
  - ❑ Impacts of rates if Austin did not own any resources
  - ❑ Budget for solar and Demand Side Management

	Potential Scenarios							
			Increase Goals			Replace FPP & Decker		
Key Uncertainties (Relative to Current Forecasts)	Least Cost Plan Meeting Council Goals	No Additional Generation	1000 MW of DSM with 40% Renewables by 2020	1200 MW of DSM with 50% Renewables by 2025	100% Emission Free by 2025	With Renewables + Natural Gas Simple Cycle Peakers	With Renewables + Natural Gas Combined Cycle	With Renewables + Compressed Air Energy Storage
High Gas								
Low Gas								
High Load								
Low Load								
High Carbon								
Low Carbon								
Capacity Market								
PTC/ITC Extn								

- Scenarios cover a wide range of values for key uncertainties
- Selected scenarios cover most feedback from the stakeholders

Proposed Timeline to City Council

- **1Q 14** • Targeted briefings and stakeholder input meetings
- **1Q 14** • Present scenarios & stakeholder results to Commission 3/17

← Task Force

- **2Q 14** • Run and analyze scenario results
- **3Q14** • Present preliminary recommendations to Committee
- **3Q14** • Committee/Commission review
- **Sep 14** • Present 2014 Generation Plan Update to Council