



# The Path Forward for the New Energy Economy

NASEO 2011 Annual Meeting

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Cris Eugster, Chief Sustainability Officer



# Introduction to CPS Energy

## **Largest Municipally Owned Electric and Gas Utility in the US**

- Serving over 700,000 electric and 300,000 gas customers
- Vertically integrated: power plants, T&D infrastructure, retail service
- JD Power number 1 customer satisfaction in the Southern Region
- Nearly \$10B in assets with AA credit rating for the company.



## Big Steps being taken in SA

**Early retirement of coal:** Decision to deactivate and mothball Deely Units 1&2 by 2018 (871MW of capacity)

**Avoid building a power plant:** A comprehensive energy efficiency program (STEP) to save 771MW by 2020

**Strong renewables portfolio:** A goal of 1500MW or 20% of our generation capacity from renewables by 2020

**Innovative smart grid program:** A 250MW virtual power plant that aggregates savings from 140,000 customers

**Building a New Energy economy:** Bringing partners to San Antonio to build the New Energy economy

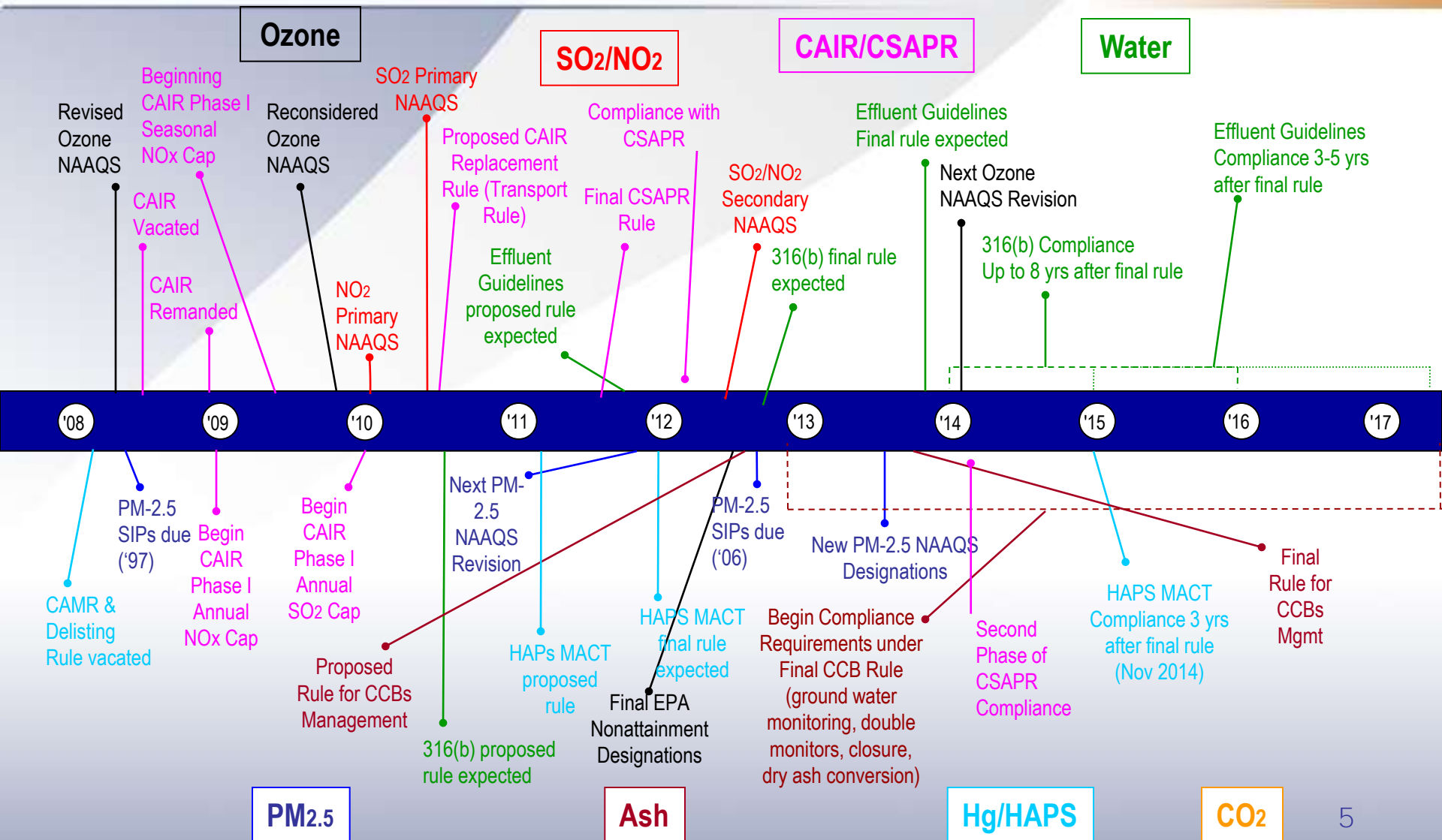


# The Business Case

- **Cost/benefit of capital investment in retrofitting aging fossil fuel plants versus New Energy resources**
- **Minimizing Three Major Future Risks to our Rate Payers**
  - Environmental risks
  - Technology risks
  - Fuel risks



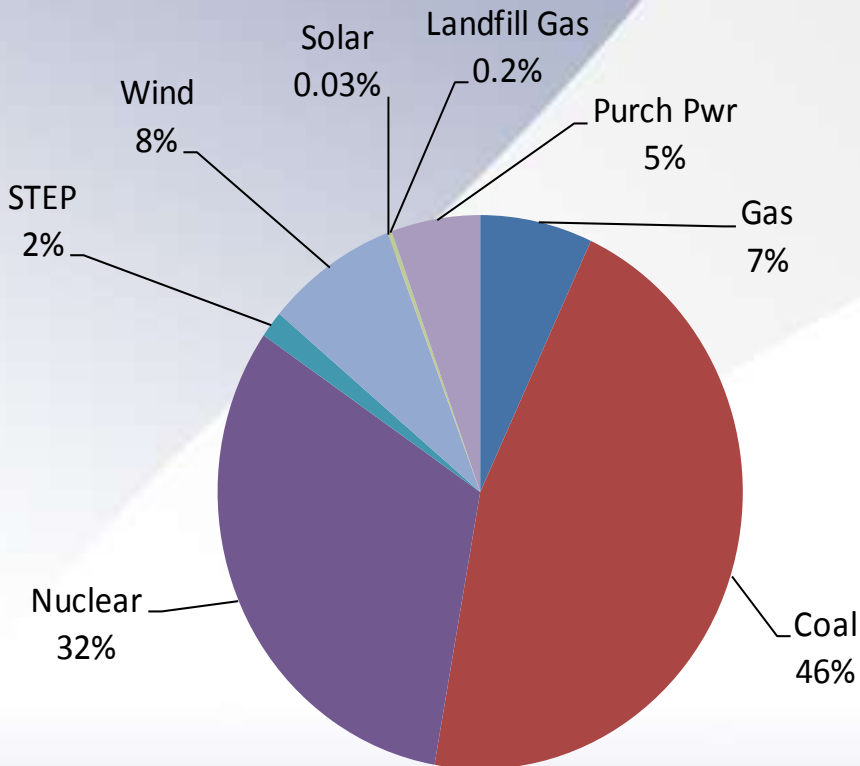
# Environmental/Regulatory Requirements for the Utility Industry





# A Diversified Portfolio

2010 Generation



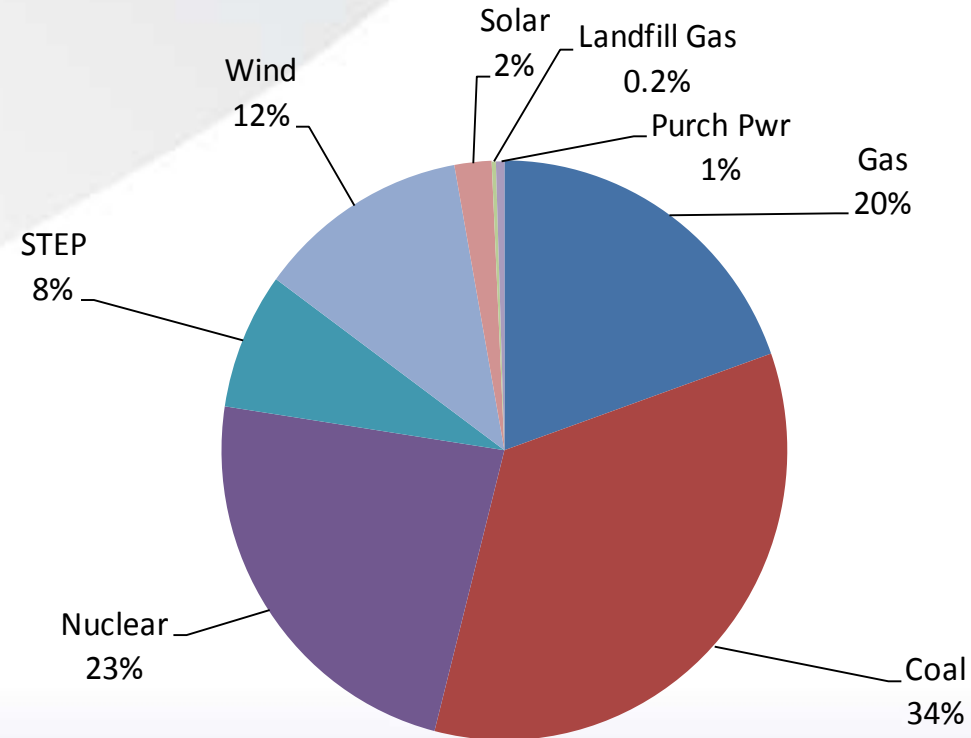
Total Generation = 26,316,425 MWh

Traditional sources = 85%

Renewable sources = 8%

Demand Reduction, Purchases = 7%

Projected Generation 2020



Total Projected = 32,994,919 MWh

Traditional sources = 77%

Renewable sources = 14%

Demand Reduction, Purchases = 9%





# Renewable Energy Projects

## Projects in Commercial Operation

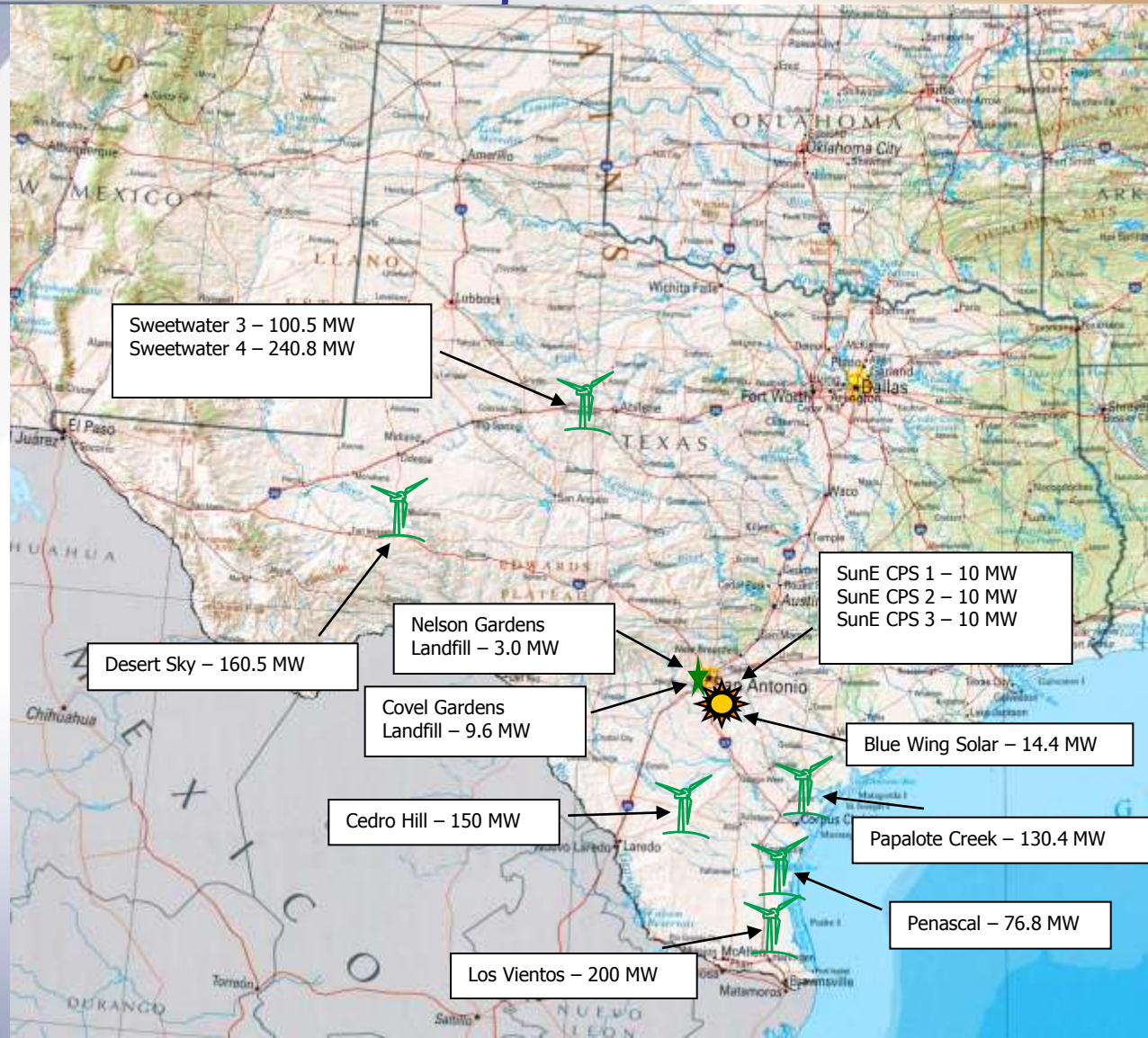
Desert Sky (wind)	160.5 MW
Sweetwater 3 (wind)	100.5 MW
Covel Gardens (landfill gas)	9.6 MW
Sweetwater 4 (wind)	240.8 MW
Penascal (wind)	76.8 MW
Papalote Creek (wind)	130.4 MW
Blue Wing Solar (solar)	14.4 MW
Cedro Hill (wind)	150.0 MW
<b>Total</b>	<b>883.0 MW</b>

## Projects in Development

SunE CPS, 3 x 10 (solar)	30.0 MW
Nelson Gardens (landfill gas)	3.0 MW
Los Vientos (wind)	200.0 MW
<b>Total</b>	<b>233.0 MW</b>

## Renewable Projects Under Contract

Wind	1,059.0 MW
Landfill Gas	12.6 MW
Solar	44.4 MW
<b>Total</b>	<b>1,116.0 MW</b>





# 14 MW Blue Wing Solar Project



- **On-line Nov. 2010**
- **215,000 panels across 150 acres**
- **14 MW (AC) of First Solar thin film PV**
- **500 kW testing 8 different technologies**
- **Visible from IH37 and US 181**





# Additional 30MW to be Installed in 2012

- 25-Year Purchased Power Agreement (PPA), fixed pricing
- 30MW installations in San Antonio area
  - 40,000 tracking PV panels per site
  - 20MW at Dos Rios Waste-water facility
- Economic development for SA market
- Commitment to education and research & development
- Commercial Operation Date scheduled for September 2012





# Clean Coal Opportunity

- **CPS Energy has signed an MOU with Summit Texas Clean Energy for 200MW over 25 years**
- **TCEP will be the first U.S.-based power plant that combines both IGCC and 90-percent carbon capture and storage technologies**
- **TCEP will be located in West Texas just outside Odessa in Ector County**

"The U.S. Department of Energy applauds CPS Energy for its progressive energy stance that includes voluntarily phasing out old coal plants and replacing them with cleaner, low-carbon technologies such as the Texas Clean Energy Project, a DOE-sponsored, breakthrough, clean-coal power project."

*- Tom Sarkus, Director, Project Financing & Technology Deployment Division, National Energy Technology Laboratory*



# Natural Gas Opportunity

- **CPS Energy evaluating options to build, purchase or repower existing units**



"Doyle Beneby, president and chief executive of municipally owned utility CPS Energy, said at the Electric Power 2011 conference in Chicago that low natural gas prices have made investments in nuclear power and coal plants less affordable.

*-Argus*



# Smart Grid Innovation: Synchronizing Supply & Demand

## The Smart Grid Home

- User driven approach
- Intelligence to reduce kwh
- Virtual power plant
- Value to user and utility

**Building a 250MW  
Virtual Power Plant**







# Utilities are at the Center of Clean Energy Wave

## Generation



Renewables  
Virtual Power  
Plant  
Storage

## Transmission & Distribution



Smart Grid  
Self Healing

## Customer Solutions



Energy Efficiency  
Energy Mgmt  
Tools  
Plug-In Vehicles

CPS Energy: A Vertically Integrated Utility



# Moving Forward into the New Energy Economy

CPS Energy wants to achieve Vision 2020 Goals as well as future goals:

Keep prices to our customers affordable

Provide reliable, clean energy for decades to come

Build the New Energy Economy in San Antonio