

ITEM 2

City of El Paso Renewable Generation Study – Status Update

APRIL 2021



Resource Planning: Balanced Approach



Reliability

- Sufficient capacity for all hours of the year
- Regulation of variable renewable resources
- Grid stability of Bulk Electric System



Customer Affordability

- Efficient use of resources
- Development and cost of new technology
- Optimal cost portfolio baseline
- Expect baseline may include early renewable and storage investments



Environmental

- Emission reduction
- Net-zero carbon goals
- Analyze versus base-case

Resource Scenarios to Be Analyzed

Least Cost Case

Counterfactual for assessing other cases

Base Case (RPS Compliant)

The New Mexico Renewable Energy Act (REA) applies to all cases except for the least-cost case

Low Carbon Cases (High Renewable & Clean Energy Integration)

Scenarios that increase the share of zero-carbon resources by more than existing policies

High Distributed Generation Case

Higher penetration of distributed solar

High Demand-Side Management Case

Higher levels of energy efficiency and demand response

No New Gas Case

No addition of gas capacity after the addition of Newman 6

Potential Resource Options

Preliminary listing of resources to be considered in 2021 IRP:

- | | | |
|--------------|---------------------------|-----------------------------|
| ▪ Solar | ▪ LM/DR – EE ¹ | ▪ Imports |
| ▪ Wind | ▪ Battery Li-Ion | ▪ Gas Fired Reciprocating |
| ▪ Biomass | ▪ Other Energy Storage | ▪ Gas Fired CT ² |
| ▪ Geothermal | ▪ Other Renewables | ▪ Gas Fired CC ³ |

Other resources and technology to be explored:

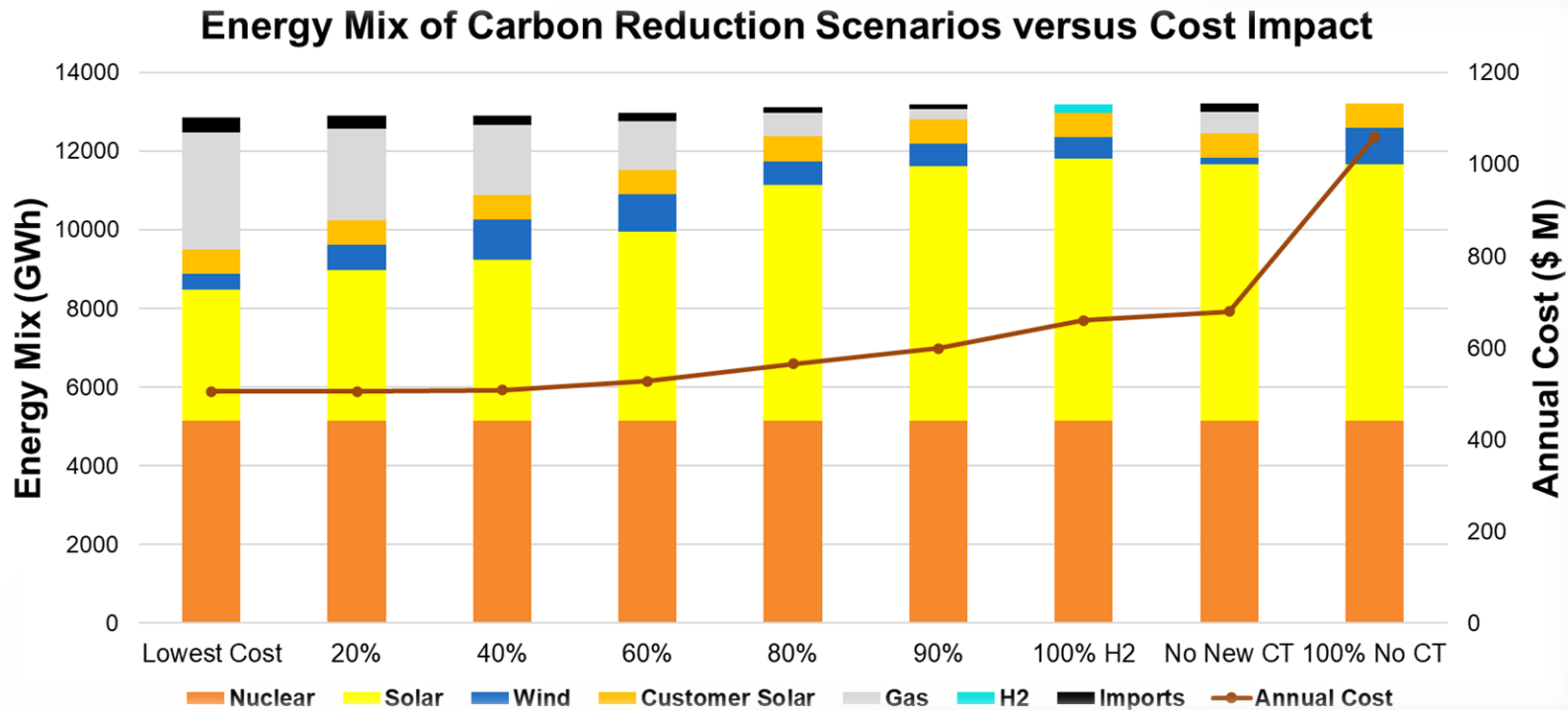
- Energy Storage – Pumped hydro, flow batteries, underground compressed air, hydrogen flywheels
- Nuclear – Modular nuclear possible option upon Palo Verde retirement but no prior to 2045
- Gas Turbine – Conversion to hydrogen fuel
- EV and Customer Sited Batteries

1. LM/DR-EE: Load Management/Demand Response- Energy Efficiency
2. Combustion Turbine
3. Combined Cycle

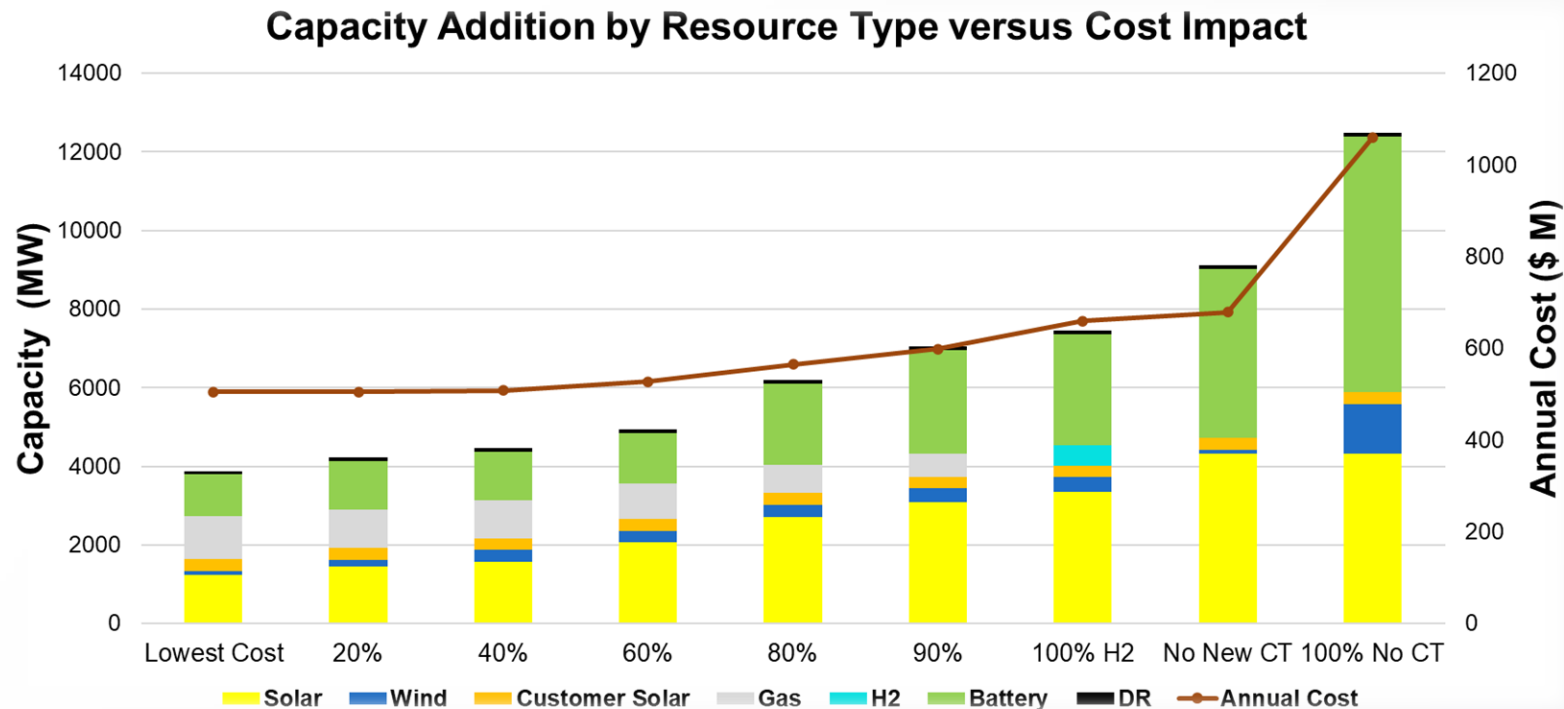
Carbon Reduction Resource Scenarios

PORTFOLIO NAME	PORTFOLIO DESCRIPTION	CARBON FREE (%)	RENEWABLE (%)
Lowest Cost	Meets State RPS	74	34
20%	20% Carbon Emission Reduction by 2040	79	40
40%	40% Carbon Emission Reduction by 2040	84	44
60%	60% Carbon Emission Reduction by 2040	89	49
80%	80% Carbon Emission Reduction by 2040	94	55
90%	90% Carbon Emission Reduction by 2040	97	58
100% H2	100% Carbon Emission Reduction by 2040 with Hydrogen Fuel	100	59
No New CT	No New Combustion Turbines after 2024	94	55
100% No CT	100% Carbon Emission Reduction by 2040 with Only Renewables (Existing Nuclear)	100	61

Resource Scenarios vs. Cost Impact



Resource Scenarios vs. Cost Impact





Community Solar Program Expansion

- Currently 5 MW of capacity, serving approximately 2,500 customers
- Customers subscribe for capacity from the community solar facilities and receive the associated energy produced on their monthly bill
- Expansion may allow a reduced cost subscription option for qualifying low-income customers

Proposed Dedicated Solar Plus Program

- A renewable energy supply alternative for educational, non-military governmental, large commercial and industrial customers
- Program supplied by competitively procured utility-scale solar PV resources (estimated between 10 to 40 MW per facility)
- Multiple customers and accounts can subscribe and receive a share of the renewable energy production
- Voluntary long-term program – price fixed for term of the agreement (hedging opportunity)
- Renewable energy will offset energy otherwise produced with EPE's system generation resources



Renewable Generation Study Next Steps

- EPE expects to complete technical modeling of scenarios in the April timeframe
- Adoption of a draft Company-wide climate and renewables goal
- EPE is moving forward with an application for facility and program approval for the DSPP at the Commission
- Evaluation of other voluntary program options is ongoing

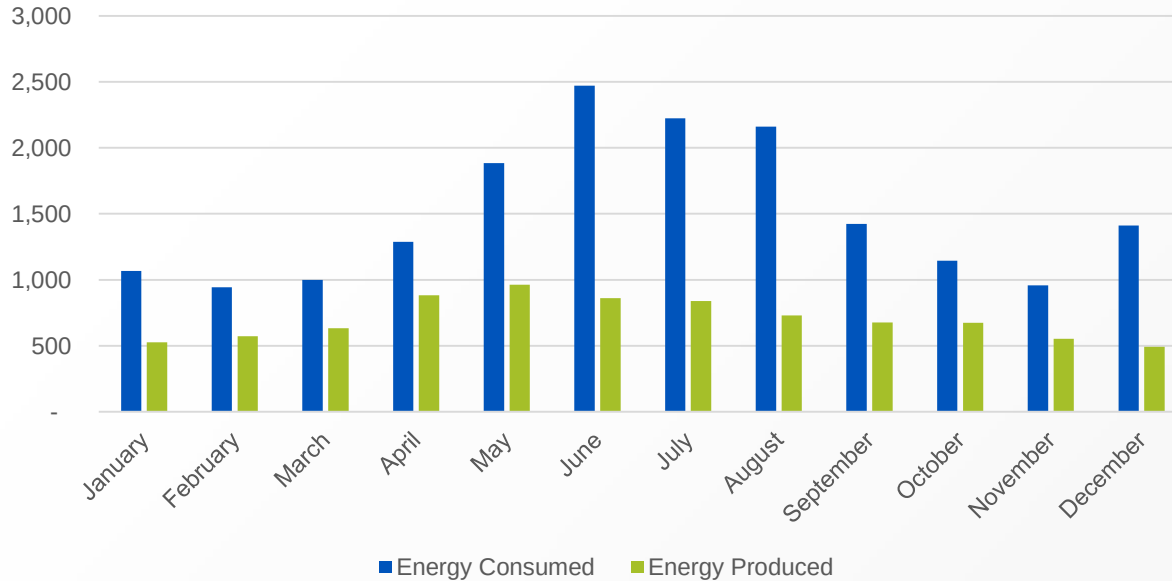
Appendix

Review of Study Deliverables

- 6.b.1** - The technical feasibility of integrating utility-scale renewable generation into EPE's utility system and the changes and impacts EPE's transmission and distribution system
- 6.b.2** - Possible costs and operational impacts related to the integration of utility-scale renewable generation into EPE's Texas service territory
- 6.b.3** - Legislative or regulatory changes, if any, that may be required to increase utility-scale renewable generation in EPE's Texas service territory and the legislative strategies necessary to implement such legislative or regulatory changes
- 6.b.4** - Potential voluntary renewable generation program offerings to allow customers to increase their use of renewable resources within the El Paso, TX city limits and EPE's Texas service territory
- 6.b.5** - Reasonable commitments that EPE can make to increase the integration of renewable generation in EPE's Texas generation portfolio
- 6.b.6** - Grant opportunities for EPE, the City, or both to increase the integration of renewable generation in EPE's Texas generation portfolio
- 6.b.7** - Potential renewable generation programs to assist with low-income assistance programs such as the Low-Income Home Energy Assistance Program or additional incentives for distributed generation

Community Solar Program Expansion: Program Overview

2020 Texas Community Solar
3kW Subscription



- 47% of energy consumed was provided through the program subscription
- Annual net bill increase under the program was \$20