4.3 Generation Resources

EPE's Resource Planning Department ("RP") identified future generation resources and purchased power to serve native load in its 2022 Loads & Resources 2023-2042 document ("L&R") dated July 20, 2022. It compares owned resources and power purchases against forecasted load to determine new resources that may be needed.

The basis for future local generation resources serving native load as detailed in the Generation Resources are summarized in Table 2 were EPE Resource Planning Department input conveyed to EPE System Planning together with the 2022 EPE L&R. Input from EPE's Resource Planning Department on future generation took first priority for generation retirements purposes, generation additions purposes, assumptions, modeling purposes while the 2022 EPE L&R assumptions took second priority for the same purposes.

The following new generation was assumed in the System Expansion Plan modeling and is reflected on Table 2.

As shown on Table 2, input from EPE's Resource Planning Department in conjunctions with 2022 L&R portfolio identifies the following:

- 228 MW (summer rating)/255 MW (winter rating) Newman 6 GT5 resource/unit is planned to be energized in 2023
- Solar/battery combination storage facility of 120/50 MW in 2022 (Buena Vista)
- Solar facility of 20 MW in 2023 (PV1)
- Solar facility of 150 MW in 2024 (Hecate)
- Solar/battery combination storage facility of 130/65 MW in 2025 (Galehead)
- Solar/battery combination storage facility of 150/65 MW in 2025 (EDFR)
- Solar/battery combination storage facility of 100/50 MW in 2025 (PNE)
- Standalone Solar facility of 250 MW in 2030
- Standalone battery storage of 333 MW in 2030
- Standalone Solar facility of 432 MW in 2032
- Standalone battery of 381 MW in 2032
- 88 MW combustion turbine (CT) in 2032

4.4 Reliability Criteria

The Plan follows Good Utility Practice and planning as described in EPE's OATT Attachment K. It uses a deterministic approach for transmission system planning. Each annual review verifies that modeling, assumptions, and planned facilities meet WECC and NERC compliance requirements under normal (N-0), and single contingency (N-1) conditions for EPE's transmission area. Under these two conditions, the network must be operated within WECC, NERC and EPE's Planning Criteria for NERC Standard TPL-001-4 to supply projected customer loads and firm transmission services over the ten-year planning horizon. In addition, for this 2022 Plan, there was some consideration to study results for initially-out-of-service (IOS) single BES element conditions. The

Table 2. Projected EPE Local Generation

Generator	Type	Capacity (MW) (1)	Planned In Service	Planned Retirement (4)	Notes
Airport PV	Photovoltaic	12	Pre-2015		2
Chaparral PV	Photovoltaic	10	Pre-2015		2
Patriot PV	Photovoltaic	10	Jan. 2015		2
Hatch PV	Photovoltaic	5	Pre-2015		2
Santa Teresa PV	Photovoltaic	20	Pre-2015		2
Macho Springs	Photovoltaic	50	Pre-2015		
Copper	Gas Combustion Turbine	63	Pre-2015	Dec. 2030	
MPS 1	Gas Combustion Turbine	90	Jan. 2015		
MPS 2	Gas Combustion Turbine	90	Jan. 2015		
MPS 3	Gas Combustion Turbine	90	Jan. 2016		
MPS 4	Gas Combustion Turbine	90	Jan. 2017		
Newman G1	Gas-fired Steam Turbine	74	Pre-2015	Dec. 2027	
Newman G2	Gas-fired Steam Turbine	74	Pre-2015	Dec. 2022	
Newman G3	Gas-fired Steam Turbine	93	Pre-2015	Dec. 2031	
Newman 4 GT1	Gas Combustion Turbine	70	Pre-2015	Dec. 2031	
Newman 4 GT2	Gas Combustion Turbine	70	Pre-2015	Dec. 2031	
Newman 4 ST1	Combined Cycle HRSG	80	Pre-2015	Dec. 2031	
Newman 5 GT3	Gas Combustion Turbine	70	Pre-2015		
Newman 5 GT4	Gas Combustion Turbine	70	Pre-2015		
Newman 5 ST2	Combined Cycle HRSG	148	Pre-2015		
Newman 6 GT5	Gas Combustion Turbine	228	Jun. 2023		3
Rio Grande G6	Gas-fired Steam Turbine	45	Pre-2015	*Inactive Reserve*	
Rio Grande G7	Gas-fired Steam Turbine	44	Pre-2015	Dec. 2022	
Rio Grande G8	Gas-fired Steam Turbine	139	Pre-2015	Dec. 2033	
Rio Grande G9	Gas Combustion Turbine	88	Pre-2015		
Buena Vista	Photovoltaic/Battery Storage	120 (120 Solar/50 Battery)	May. 2023		6
PV1	Photovoltaic	20	May. 2023		2
Hecate	Photovoltaic	150	May. 2024		6
BSC1	Photovoltaic/Battery Storage	130 (130 Solar/65 Battery)	May. 2025		5
BSC2	Photovoltaic/Battery Storage	150 (150 Solar/65 Battery)	May. 2025		5
BSC3	Photovoltaic/Battery Storage	100 (100 Solar/50 Battery)	May. 2025		5
Renewable Generation Standalone Solar 2030	Photovoltaic	250	May. 2030		5
Renewable Generation Standalone Battery Storage 2030	Battery Storage	333	May. 2030		5
CTR1	Gas Combustion Turbine	88	May. 2032		5
Renewable Generation Standalone Solar 2032	Photovoltaic	432	May. 2032		5
Renewable Generation Standalone Battery Storage 2032	Battery Storage	381	May. 2032		5

Notes:

1. Null, note from former plan does not apply to current plan.
2. This photovoltaic generation connects into EPE's distribution system.
3. Plan identifies Newman 6GT5 approximately 1 mile east of existing Newman Generation Station.
4. Null, note from former plan does not apply to current plan.
5. Planned facilities pending studies to determine location.
6. LGIA Ratings.