

Integrated Resource Plan Public Advisory Group Kickoff Meeting

Meeting 1 - May 25, 2017



The Electric Company

El Paso Electric

Meeting Agenda

Kickoff Meeting

- **Welcome and Introduction**
 - Introductions
 - Maritza Perez: Case Manager
 - Omar Gallegos: Director of Resource Planning and Management
 - Safety and Ground Rules
 - Safe Harbor Statement
- **NMAC Rule and Public Advisory Process – Maritza Perez**
 - NMAC Rule Requirement
 - IRP Purpose and General Information
 - Public Advisory Process
- **Resource Planning Process Overview – Omar Gallegos**
 - EPE Service Territory
 - IRP Rule Goals and Required Content
 - Resource Planning Process and Overview
 - Existing Conventional and Renewable Resources
 - Load Profile and Duration Curve
 - Capacity Expansion Modeling
- **Public Advisory Group Meeting Schedule**
- **Discussion**

Welcome and Introduction

Presenters for this Meeting

- **Maritza Perez: Case Manager**
- **Omar Gallegos: Director of Resource Planning and Management**

Safety and Basics

- **Fire Escape Routes**
- **Sign in with Security Officer**
- **Sign in at Meeting Room**
- **Facilities**

Ground Rules

Meeting Rules and Guidelines

- **Meetings will follow the agenda**
- **Presentations by El Paso Electric (EPE) staff**
- **Discussion will follow**
 - All public input and requests submitted in writing will be responded to in writing
- **Communications should be respectful and to the point**
- **Facilitator's role**

Safe Harbor Statement

Certain matters discussed in this Integrated Resource Plan ("IRP") public advisory group presentation other than statements of historical information are "forward-looking statements" made pursuant to the safe harbor provisions of the Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended. Such statements are subject to a variety of risks, uncertainties and other factors, most of which are beyond El Paso Electric Company's ("EPE" or the "Company") control, and many of which could have a significant impact on the Company's operations, results of operations, and financial condition, and could cause actual results to differ materially from those anticipated. Additional information concerning factors that could cause actual results to differ materially from those expressed in forward-looking statements is contained in EPE's most recently filed periodic reports. Any such forward-looking statement is qualified by reference to these risks and factors. EPE cautions that these risks and factors are not exclusive.

Management cautions against putting undue reliance on forward-looking statements or projecting any future assumptions based on such statements. Forward-looking statements speak only as of the date of this IRP public advisory group presentation, and EPE does not undertake to update any forward-looking statement contained herein, except to the extent the events or circumstances constitute material changes in this IRP that are required to be reported to the New Mexico Public Regulation Commission ("NMPRC" or "Commission") pursuant to its IRP Rule, 17.7.3 New Mexico Administrative Code.

Integrated Resource Plan

NMAC Rule Requirement

- **The Integrated Resource Plan and Public Advisory Group are requirements under the following: New Mexico Efficient use of Energy Act New Mexico Public Regulation Commission's ("Commission" or "NMPRC") Integrated Resource Plan Rule 17.7.3 NMAC**
- **Other applicable standards**
 - Energy Efficiency Rule 17.7.2 NMAC
 - Renewable Energy for Electric Utilities Rule 17.9.572 NMAC
 - Stipulation Agreement NMPRC Case 15-00241-UT
- **EPE Website has links to the Rules**
 - <https://www.epelectric.com/community/2017-18-public-advisory-group-meetings>

Integrated Resource Plan

Purpose and General Information

Why?

- To create a 20 year resource planning document

When?

- Every three years EPE must file an IRP with Commission
- The next IRP filing date is July 2018
- IRP Public Advisory Process starts May 25, 2017 and will continue on a regular basis until filing date

Integrated Resource Plan

Public Advisory Process

- **The purpose of the public advisory process is to receive public input and solicit public commentary concerning resource planning and related resource acquisition issues**
- **Begins one year before filing the IRP with the Commission**
- **Notice to the Public**
- **Facilitator**
- **Meeting Schedules and Agendas**
 - Participants may add their own presentations to the agendas for the January and February meetings

Integrated Resource Plan

Public Advisory Process

- Topics to be discussed as part of the public participation process include, but are not limited to,
 - the assessment of need for additional resources (7/6/17)
 - identification of resource options (7/6/17 meeting)
 - the utility's load forecast (8/3/17 meeting)
 - evaluation of existing supply- and demand-side resources (9/7/17 meeting)
 - the cost and general attributes of potential additional resources (10/5/17 meeting)
 - modeling and risk assumptions (10/5/17 meeting)
 - development of the most cost-effective portfolio of resources for the utility's IRP (11/16/17 meeting)

Integrated Resource Plan

Public Advisory Process Additional Guidelines*

- EPE will respond to public input regarding the subject matter presented in a Public Advisory Group Process meeting 10 days prior to the next meeting unless additional time is requested.
- EPE will respond in writing to public input and requests submitted to EPE in writing.
- EPE will submit draft final IRP report 60 days prior to filing with NMPRC and schedule a public meeting to receive and respond to public feedback.
- EPE will submit final IRP report 30 days prior to filing with NMPRC and schedule a public meeting to receive and respond to public feedback.

*Joint Stipulation Case No. 15-00241-UT

Integrated Resource Plan Resource Planning Process Overview

Omar Gallegos
Director of Resource Planning and Management

EPE Service Territory



IRP – Rule Goals

- **The goal of the IRP process is**
“to identify the most cost effective portfolio of resources to supply the energy needs of customers. For resources whose costs and service quality are equivalent, the utility should prefer resources that minimize environmental impacts.” (17.7.3.6 NMAC)
- **Most Cost Effective Portfolio**
“...means those supply-side resources and demand-side resources that minimize the net present value of revenue requirements proposed by a utility to meet electric system demand during the planning period consistent with reliability and risk considerations;” (17.7.3.7.H NMAC)

IRP Report Required Content

- (1) description of existing electric supply-side and demand-side resources;
- (2) current load forecast as described in this rule;
- (3) load and resources table;
- (4) identification of resource options and rate design options;
- (5) description of the resource and fuel diversity;
- (6) identification of critical facilities susceptible to supply-source or other failures;
- (7) determination of the most cost effective resource portfolio and alternative portfolios;
- (8) description of public advisory process;
- (9) action plan; and
- (10) other information that the utility finds may aid the commission in reviewing the utility's planning processes

Rule 17.7.3.9.B NMAC

IRP Report Required Content

- 20-year planning horizon
- Will detail the specific actions the utility will take to implement the integrated resource plan spanning a four-year period following the filing of the utility's IRP
- The action plan will include a status report of the specific actions contained in the previous action plan

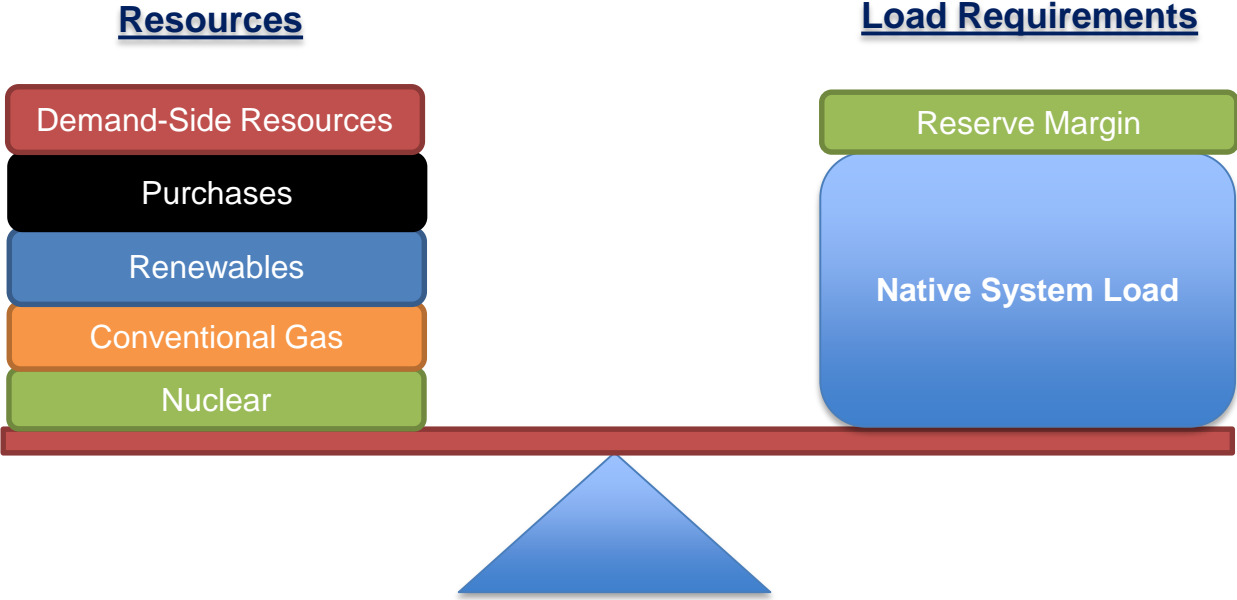
IRP Report Required Content

Joint Stipulation Case No. 15-00241-UT

- EPE will review continued operation of units slated for retirement within five years (2023) through quantitative modeling based on cost effectiveness, operational risk, reliability, safety of personnel, and environmental and engineering considerations.
- EPE will evaluate renewable pricing based on publically available sources.
- EPE will not consider Renewable Portfolio Standard Requirements and Energy Efficiency Goals as ceilings on resources included in the EPE Portfolio for purposes of the IRP analysis.
- EPE will consider purchased power agreement options bid into future request for proposals, and may at its discretion use purchased power to delay new resource additions.
- EPE will model and asses cost-effectiveness of reasonably available Energy Efficiency (EE) and Load Management (LM) resources and will provide specific parameters used in modeling LM resources consistent with other resources evaluated.
- EPE will evaluate rate design, including impact of rate differentials on peak demand and energy consumption, and comparison to supply-side and other demand-side measures on cost-effectiveness.

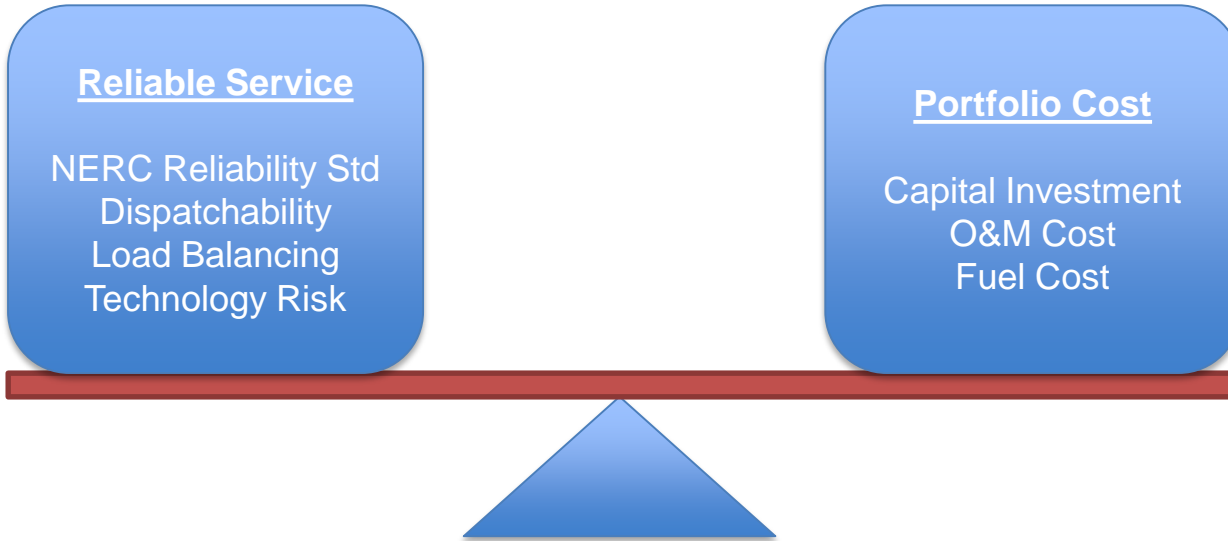
Resource Planning

“effective portfolio of resources to supply the energy needs of customers”



Resource Planning

“...minimize the net present value of revenue requirements proposed by a utility to meet electric system demand during the planning period consistent with reliability and risk considerations”

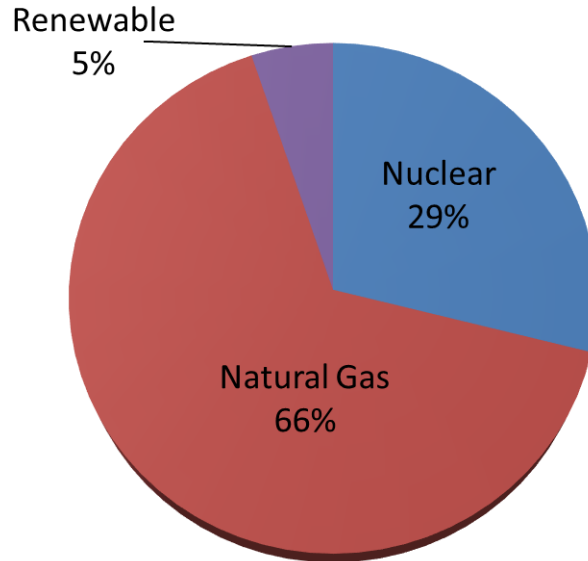


Resource Planning

- **While EPE is required to file its IRP every three years, Resource Planning is a year-round, continuous process:**
 - Monitoring existing resources
 - Monitoring load developments
 - Monitoring reliability requirements
 - Maintaining a pulse on technology developments
 - Maintaining a pulse on industry developments
- **EPE initiates the IRP public advisory process with its most current:**
 - Load forecast*
 - Resource portfolio and planned retirements*

*Both will be discussed in more detail in subsequent meetings and are open for discussion.

Existing Portfolio Resource Mix (Capacity)



*Supply-side resources (customer-owned, behind the meter distributed generation not included)

Existing Conventional Generation

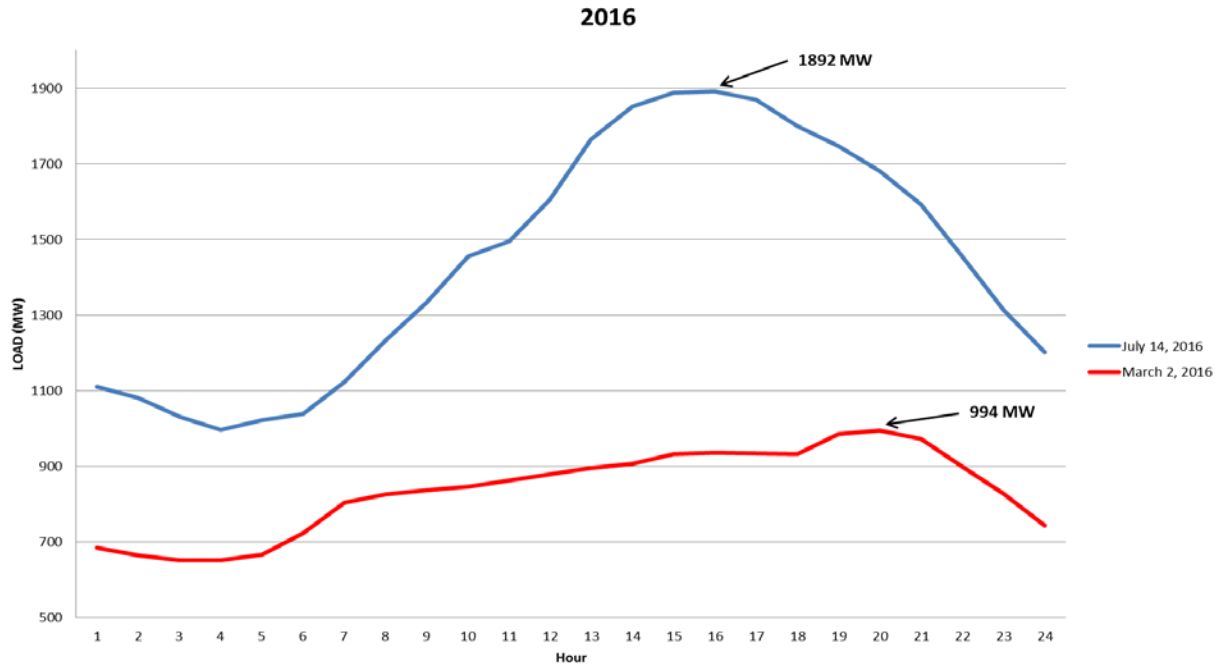
Unit Name	Fuel Type	Summer Net Capacity	Commission Year
Palo Verde 1	Nuclear	211	1986
Palo Verde 2	Nuclear	211	1986
Palo Verde 3	Nuclear	211	1988
Rio Grande 6	Gas	46	1957
Rio Grande 7	Gas	46	1958
Rio Grande 8	Gas	142	1972
Rio Grande 9	Gas	88	2013
Newman 1	Gas	74	1960
Newman 2	Gas	76	1963
Newman 3	Gas	97	1966
Newman 4	Gas	227	1975
Newman 5	Gas	278	2009
Copper	Gas	64	1980
MPS 1	Gas	88	2015
MPS 2	Gas	88	2016
MPS 3	Gas	89	2016
MPS 4	Gas	89	2016

Existing Renewable Resources

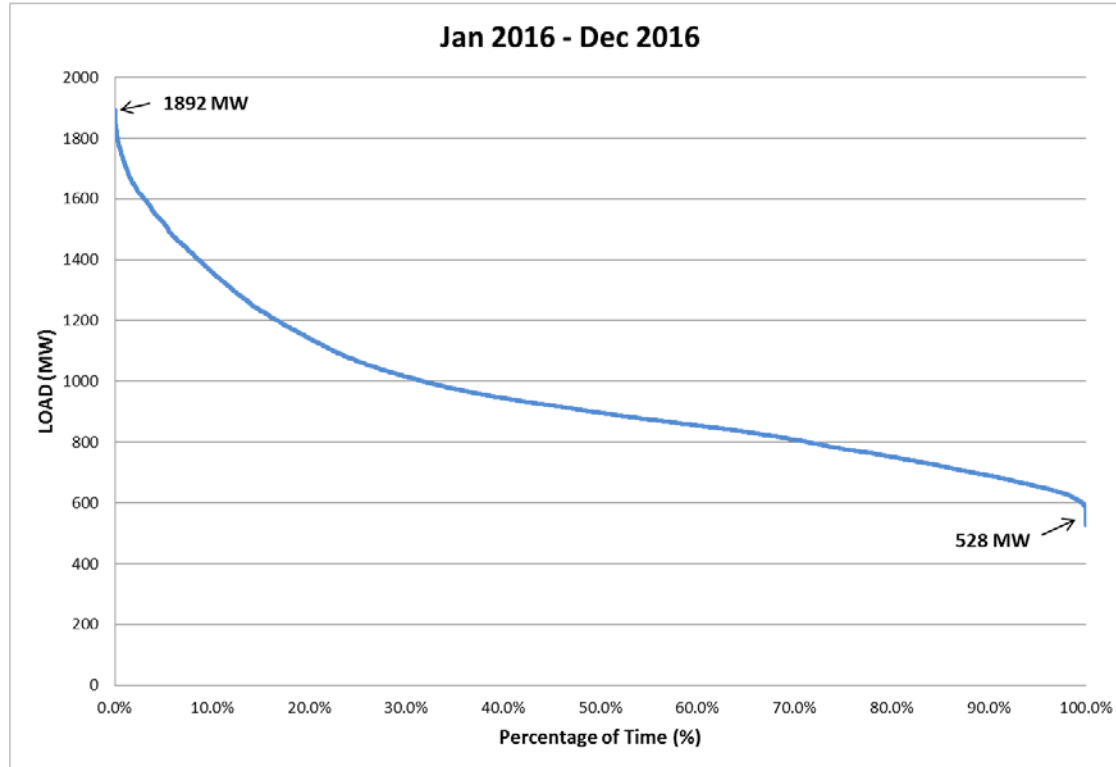
Resource	Type	Nameplate Capacity (MW)	Commission Date
Hatch	Solar	5	2011
NRG Roadrunner	Solar	20	2011
Centennial Solar	Solar	12	2012
El Chaparral Solar	Solar	10	2012
Macho Springs Solar	Solar	50	2014
Newman Solar	Solar	10	2014
EPE Community Solar	Solar	3	Planned 2017
Holloman Solar	Solar	5	Planned 2017
EPCC Solar	Solar	0.014	2012
Wrangler Substation	Solar	0.048	2011
Stanton Tower	Solar	0.031	2012
Rio Grande Carport	Solar	0.064	2009
Newman Carport	Solar	0.064	2009
Van Horn	Solar	0.02	2013
Camino Real Landfill	Biogas	1.6	2008

Typical Load Profiles

Summer (Peak) and Spring (Low Load)

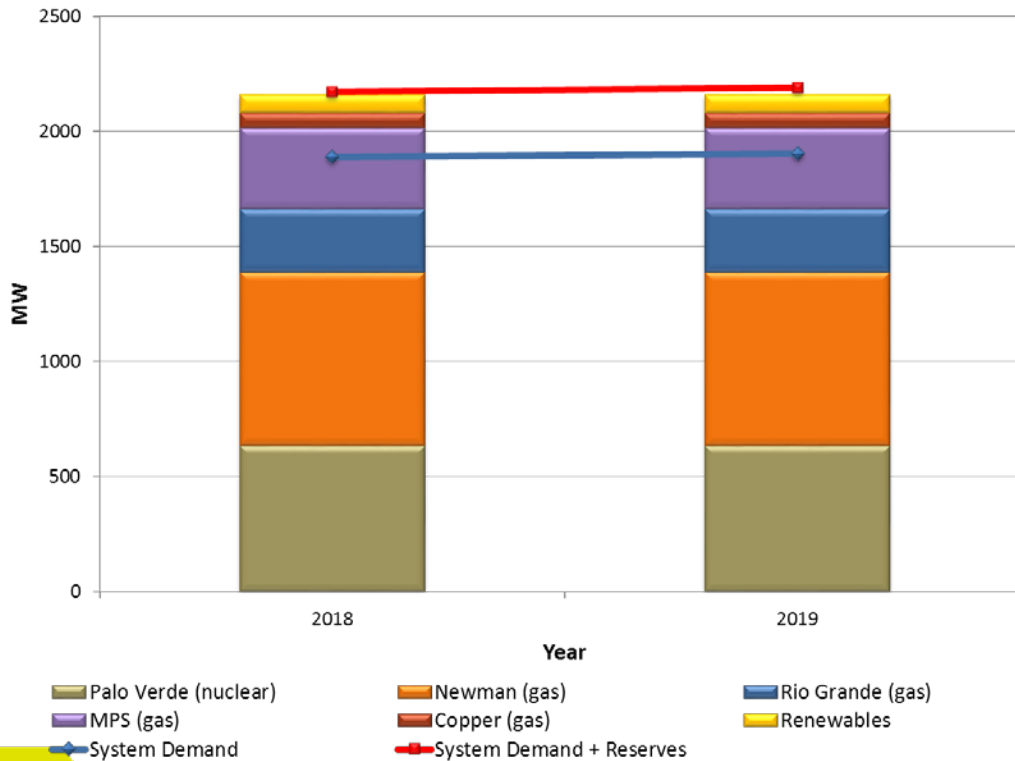


Load Duration Curve



2-Year Loads and Resources Chart

El Paso Electric Company
Summer Peak Balance of Loads and Resources



Capacity Expansion Modeling

- **Capacity expansion model will be utilized to perform the portfolio analysis**
- **Resource options will be identified for inclusion in the capacity expansion model**
- **Capacity expansion model will evaluate various portfolio options:**
 - Resource additions to meet peak demand
 - Resource dispatch/utilization to meet the year energy needs

Capacity Expansion Modeling

Preliminary listing of resources to be considered

- **Solar***
- **Wind***
- **Biomass***
- **Other Renewables***
- **Gas Fired CC**
- **Gas Fired CT**
- **Gas Fired Reciprocating**
- **Storage**
- **Geothermal**
- **Demand-side Options****

Options not to be considered, but may be re-evaluated

- **Nuclear**
- **Coal**

*Renewables to be considered are in addition to and above Renewable Portfolio Standard requirements.

**Demand-side options to be considered are in addition to and above Energy Efficiency requirements.

Capacity Expansion Modeling

- EPE is open to considering alternative resource options along with their respective characteristics, such as:
 - Operational profile
 - Technology state of development and viability
 - Cost
- **EPE does not utilize the IRP process to determine resource ownership (i.e. EPE-owned or contracted as a purchased power agreement)***
 - All resources will be modeled based on capital and O&M requirements per current industry estimates that are publicly available*
 - Estimated costs will be shared in future presentations

*As agreed to in the 2015 IRP Settlement Stipulation.

Capacity Expansion Modeling

- Resource options will be evaluated on the net present value of revenue requirements for a resource portfolio and with consideration to safety, reliability and risk
- **Net Present Value**
 - Capital investment
 - Yearly O&M
 - Yearly fuel costs
 - Purchase power and opportunity sales
- **EPE will provide additional presentations with more details and have discussions the topics denoted on the following slide**
 - Dates may be subject to change, but advance notice will be provided

Upcoming meeting

Meeting 2 - Kickoff meeting in Santa Fe, NM

Date: June 8, 2017

Time: 2:00-4:00 p.m.

Location: NMPRC Offices

4th Floor Hearing Room

P.E.R.A. Building

1120 Paseo de Peralta

Santa Fe, NM 87501

Schedule – Public Advisory Group Meetings

Meeting	Date	Time	Subject	Location
(1)	5/25/2017	2:00 p.m.	Kick-off and Introduction Explanation of IRP Process and Goals Resource Planning Process and Overview Preliminary Listing of Resource Options to Consider	EPE Office 555 S. Compress Rd. Las Cruces, NM
(2)	6/8/2017	2:00 p.m.	Summary of IRP process and introduction to system	NMPRC Offices 4th Floor Hearing Room P.E.R.A. Building 1120 Paseo de Peralta Santa Fe, NM
(3)	7/6/2017	2:00 p.m.	System Operations - Reliability, Import Limits and Balancing Transmission & Distribution Systems Overview and Projects Operational Considerations/Requirements for Future Resources Existing Conventional Resources Existing Renewable Resources and DG System generation retirement plan and process Assessment of need for additional resources	Donn Ana County Conference Room 845 N. Motel Blvd. Las Cruces, NM
(4)	8/3/2017		Energy Efficiency/Demand Response Programs and Options Rate Considerations and Potential Impacts on Resource Planning Decisions Renewable Portfolio Standard Impacts Load Forecast Load Forecast - Impacts from EE/DR and Rate Structure	Las Cruces
(5)	9/7/2017		Conventional Capacity and Generation Option Considerations Demand Side Resource Options Renewable Energy Options (Solar, Wind, Geothermal, Storage, DG) Operational Considerations for Intermittent Resources and Balancing Renewable & Conventional Power Plant Siting and Environmental Considerations	Las Cruces
(6)	10/5/2017		DEADLINE FOR OPTION SUBMITTAL FROM PUBLIC Resource Planning Base Case Assumptions Initial Cost Estimates for Resource Planning Options Modeling and risk assumptions and the cost & general attributes of potential additional resources	Las Cruces
(7)	10/12/2017		Resource Planning Overview and Modeling for Cost of Potential Additional Resources	Santa Fe
(8)	11/16/2017		Preliminary Results with 2017 Load Forecast Presentation of Resulting 20-year Expansion Plan Development of the most cost-effective portfolio of resources for utility's IRP	Las Cruces
(9)-(10)	Jan 19, Feb 16		Informational Meetings or Discussions as Requested	LC/Santa Fe
(11)	4/30/2018		IRP Draft Presentation	Las Cruces
(12)	5/16/2018		Follow-up meeting to receive and respond to public feedback	Las Cruces
(13)	6/8/2018		Final IRP presentation showing new load forecast	Las Cruces
(14)	6/29/2018		Follow-up meeting to receive and respond to public feedback	Las Cruces
	7/15/2018		IRP Filing Date	

For More Information

- EPE's IRP website
<https://www.epelectric.com/community/2017-18-public-advisory-group-meetings>
- E-mail NMIRP@epelectric.com to be added to the Public Advisory Group e-mail distribution list. You will receive updates on available presentation material and future meetings. Questions can also be submitted to this e-mail.

Acronyms

EE	- Energy Efficiency
EPCC	- El Paso Community College
EPE	- El Paso Electric Company, or the "Company"
Gas Fired CC	- Combined Cycle
Gas Fired CT	- Combustion Turbine
IRP	- Integrated Resource Plan
LM	- Load Management
MPS	- Montana Power Station
MW	- MegaWatts (1,000 kW)
NERC	- North American Electric Reliability Council
NMAC	- New Mexico Administrative Code
NMPRC	- New Mexico Public Regulation Commission, or "Commission"
O&M	- Operation & Maintenance

Discussion