



Mollhoff/Fernandez

**RESOLUTION NO. 6389**

**WHEREAS**, the Board of Directors has determined it is in the best interest of the District, its employees, and its customer-owners to establish written policies that describe and document OPPD's corporate governance principles and procedures; and

**WHEREAS**, each policy was evaluated and assigned to the appropriate Board Committee for oversight of the monitoring process; and

**WHEREAS**, the Board's System Management and Nuclear Oversight Committee (the "Committee") is responsible for evaluating Board Policy SD-9: Resource Planning on an annual basis. The Committee has reviewed the SD-9: Resource Planning Monitoring Report and finds OPPD to be sufficiently in compliance with the policy as stated.

**NOW, THEREFORE, BE IT RESOLVED** that the Board of Directors of Omaha Public Power District accepts the SD-9: Resource Planning Monitoring Report, in the form as set forth on Exhibit A attached hereto and made a part hereof, and finds OPPD to be sufficiently in compliance with the policy as stated.



Exhibit A

# Monitoring Report SD-9: Resource Planning System Management Committee August 11, 2020

Javier Fernandez, Vice President – Financial Services & CFO

# SD-9 Resource Planning

## Strategic Directive

The Board of Directors recognizes that the District will have to adapt to the rapidly changing electric utility business environment. The OPPD resource planning process will provide the resources and analytical capability to adequately assess OPPD's Integrated Resource Portfolio (or Supply and Demand Portfolio) to ensure reliable, competitive, cost-effective and environmentally sensitive service for our customers.

To attain this goal, OPPD shall:

- Periodically assess, for strategic and integrated resource plans, OPPD's mix of generation assets, demand-side management programs, purchased power agreements and renewable energy resources.
- Utilize multiple scenarios to properly evaluate the range of risks posed by varying future assumptions such as, but not limited to fuel costs, economic growth, regulations and emerging technologies.
- Ensure all integrated resource strategic plans support and align with OPPD's Strategic Directives.

# SD-9 Resource Planning

## Strategic Directive

The Board of Directors recognizes that the District will have to adapt to the rapidly changing electric utility business environment. The OPPD resource planning process will provide the resources and analytical capability to adequately assess OPPD's Integrated Resource Portfolio (or Supply and Demand Portfolio) to ensure reliable, competitive, cost-effective and environmentally sensitive service for our customers.

To attain this goal, OPPD shall:

- Periodically assess, for strategic and integrated resource plans, OPPD's mix of generation assets, demand-side management programs, purchased power agreements and renewable energy resources.
- Utilize multiple scenarios to properly evaluate the range of risks posed by varying future assumptions such as, but not limited to fuel costs, economic growth, regulations and emerging technologies.
- Ensure all integrated resource strategic plans support and align with OPPD's Strategic Directives.

**The Board of Directors recognizes that the District will have to adapt to the rapidly changing electric utility business environment. The OPPD resource planning process will provide the resources and analytical capability to adequately assess OPPD's Integrated Resource Portfolio (or Supply and Demand Portfolio) to ensure reliable, competitive, cost-effective and environmentally sensitive service for our customers.**

- **Resource Planning Process**

- OPPD maintains a dedicated staff who facilitate both long term and short term “Resource Planning”.
  - Short Term – Used to derive near-term (usually 5 years) worth of expected load, fuel budgets, generation volumes, off system sales as well as fuel and purchase power. Rarely, if ever, are long term resource decisions made during this short term planning as the outputs are used primarily for the annual Corporate Operating Plan
  - Long Term – Used to derive the same outputs as the Short Term version but on a much longer duration and usually involve longer term resource recommendations.
- OPPD uses sophisticated and robust platforms while resource planning including AURORA for resource planning and Itron for load forecasting.
- OPPD's process incorporates robust supply and demand side resource evaluations which balance competitive, cost-effective and environmentally sensitive service.

# SD-9 Resource Planning

## Strategic Directive

The Board of Directors recognizes that the District will have to adapt to the rapidly changing electric utility business environment. The OPPD resource planning process will provide the resources and analytical capability to adequately assess OPPD's Integrated Resource Portfolio (or Supply and Demand Portfolio) to ensure reliable, competitive, cost-effective and environmentally sensitive service for our customers.

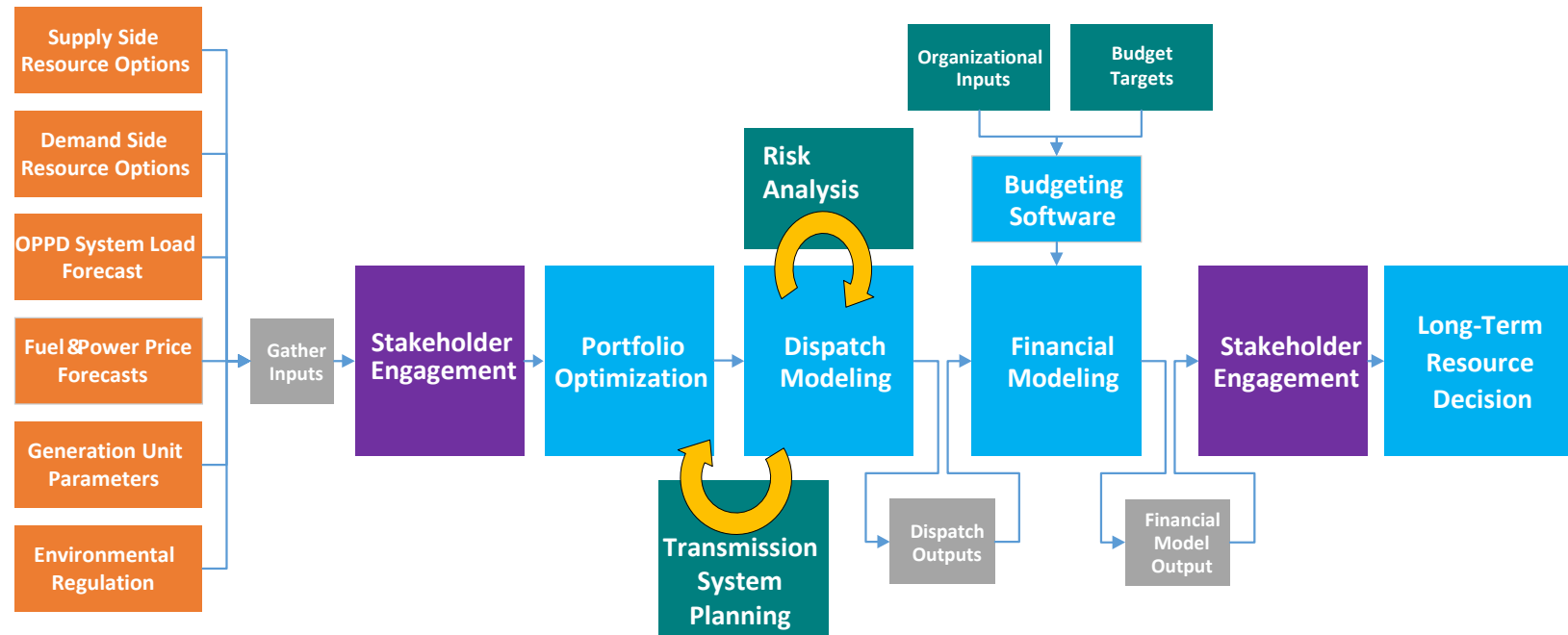
To attain this goal, OPPD shall:

- Periodically assess, for strategic and integrated resource plans, OPPD's mix of generation assets, demand-side management programs, purchased power agreements and renewable energy resources.
- Utilize multiple scenarios to properly evaluate the range of risks posed by varying future assumptions such as, but not limited to fuel costs, economic growth, regulations and emerging technologies.
- Ensure all integrated resource strategic plans support and align with OPPD's Strategic Directives.

# Periodically assess, for strategic and integrated resource plans, OPPD's mix of generation assets, demand-side management programs, purchased power agreements and renewable energy resources.

- Short Term resource planning is completed annually.
- Long term resource planning can be triggered by a variety of diverse circumstances, including but not limited to:
  - Meaningful changes to Southwest Power Pool accreditation policy
  - System reserve margin changes
  - Alterations of current environmental regulations
  - Proposed new environmental regulations
  - Bulk Electric System reliability/resiliency changes
  - Western Area Power Administration filings
  - Significant load changes
  - Combination of some or all of the above

Long Term Integrated Resource Planning Process



**Periodically assess, for strategic and integrated resource plans, OPPD's mix of generation assets, demand-side management programs, purchased power agreements and renewable energy resources.**

- **Power with Purpose Highlights**

- First-time evolution for the simultaneous optimization of transmission and generation planning while balancing the tradeoffs for the reliable, competitive, cost effective, and environmentally sensitive.
- Included the development of an innovative efficient-frontier framework to simultaneously optimize the multiple objectives of OPPD's mission: affordable, reliable, and environmentally sensitive.
- Process resulted in 70 million potential resource combinations.
- Robust supply and demand side options were present.
- Effort is critical to realize an anticipated 80-90% reduction over current North Omaha emissions.
- Outcome is expected to posture OPPD to embrace decarbonization in the coming years.



Periodically assess, for strategic and integrated resource plans, OPPD's mix of generation assets, demand-side management programs, purchased power agreements and renewable energy resources.

# Analysis Objective/Technologies Evaluated

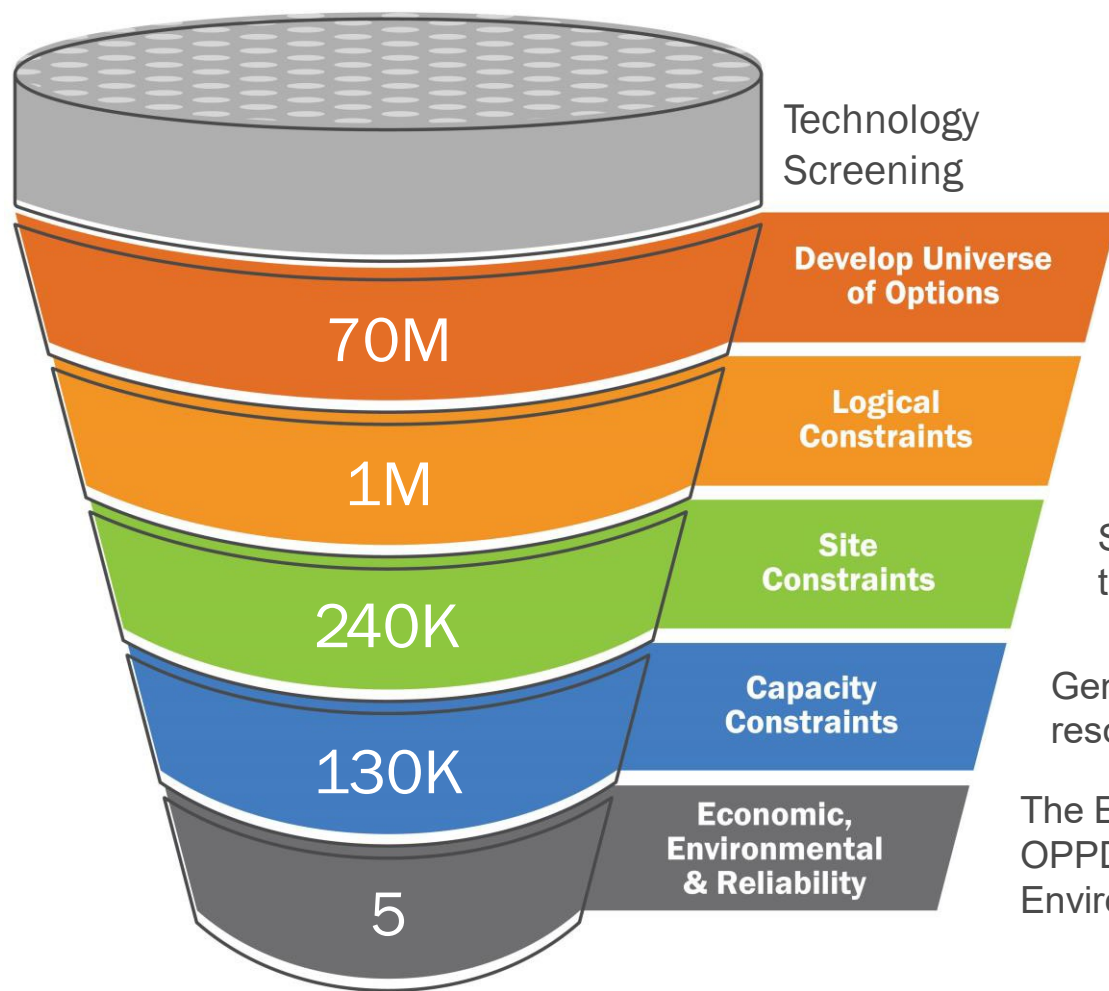
New Generation & Storage	Existing Assets	New Voltage Support Resources	New Demand Side Resources*
Combustion Turbines	North Omaha 4-5 Natural Gas	Synchronous Condensers	<b>Demand Side Management:</b>  C&I Curtailable Cool Smart Residential Thermostats School Kits Online Products SMB Load Management C&I Prescriptive C&I Strategic Energy Management ECO 24/7 HVAC Smart Rebate Certified High Performance Homes C&I Custom C&I New Construction Small Business Direct Install Residential Lighting Income Qualified
Reciprocating Engines	North Omaha 4-5 Coal	Static VAR Compensators	
Photovoltaic Solar	North Omaha 4-5 Retirement	Transmission Expansions	
Battery Storage	North Omaha 1-3 Sync Condensers	Statcoms	
Combined Cycles	North Omaha 4-5 Sync Condensers	Capacitor Banks	
Wind Turbines	North Omaha 1-3 Natural Gas		
New Nuclear/ Coal Baseload	FCS Sync Condenser		
			More than 4,000 other measures evaluated

- Analysis objective to balance affordability, reliability and resiliency and environmental sensitivity.
- OPPD's analysis considered many supply, demand, and transmission resources.
- Technologies in grey were screened out due to significant cost premiums, comparative ineffectiveness, or failing to meet technical or resiliency requirements.

\*Demand Side Management example programs were considered in a detailed analysis and will reduce OPPD's resource requirements to the extent that they are achieved and realized.

Periodically assess, for strategic and integrated resource plans, OPPD's mix of generation assets, demand-side management programs, purchased power agreements and renewable energy resources.

## Modeling Approach\*



The universe of options is created by all combinations of technologies, sites, and sizes.

The logical constraints eliminate physically infeasible options – such as a North Omaha 1-3 being both retired and operating on natural gas simultaneously.

Site constraints limit the total amount of resources at any one location to enhance resiliency and leverage existing transmission infrastructure.

Generation capacity constraints ensure that there are sufficient resources to meet customer demands throughout the year.

The Efficient Frontier identifies combinations of resources that best achieve OPPD's competing objectives of Affordable, Reliable/Resilient, and Environmentally Sensitive and will be confirmed post RFP.

\*Modeling approached utilized Aurora, PSSE and supplemental tools

# SD-9 Resource Planning

## Strategic Directive

The Board of Directors recognizes that the District will have to adapt to the rapidly changing electric utility business environment. The OPPD resource planning process will provide the resources and analytical capability to adequately assess OPPD's Integrated Resource Portfolio (or Supply and Demand Portfolio) to ensure reliable, competitive, cost-effective and environmentally sensitive service for our customers.

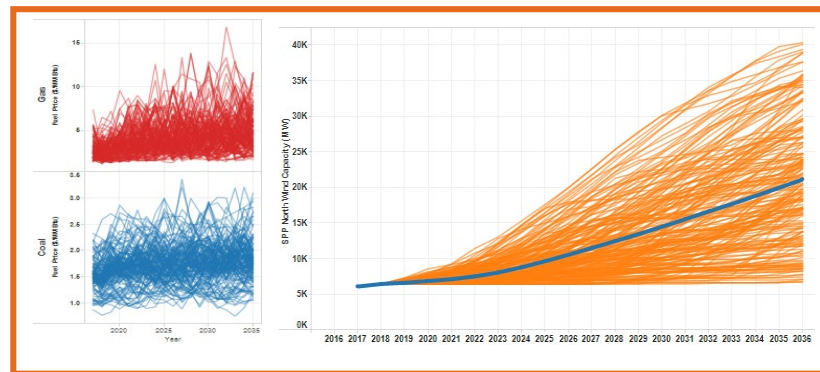
To attain this goal, OPPD shall:

- Periodically assess, for strategic and integrated resource plans, OPPD's mix of generation assets, demand-side management programs, purchased power agreements and renewable energy resources.
- Utilize multiple scenarios to properly evaluate the range of risks posed by varying future assumptions such as, but not limited to fuel costs, economic growth, regulations and emerging technologies.
- Ensure all integrated resource strategic plans support and align with OPPD's Strategic Directives.

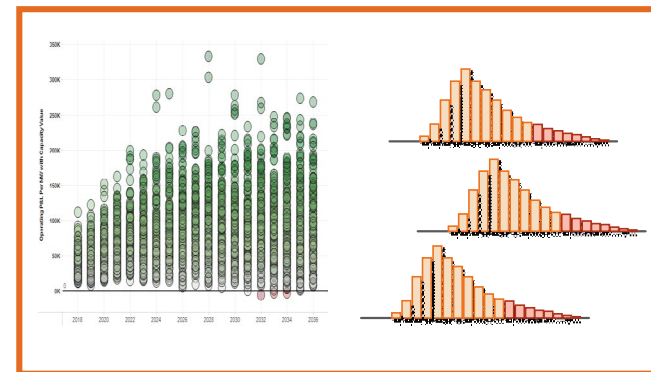
# Utilize multiple scenarios to properly evaluate the range of risks posed by varying future assumptions such as, but not limited to fuel costs, economic growth, regulations and emerging technologies.

- As appropriate, OPPD's processes use a range of risk analysis techniques including stochastic and scenario analysis, varying inputs across ranges of potential outcomes.
- These simulations can tell us how potential portfolios will fare in unknown future states including the impacts to both expected generation volumes and emissions, overall cost, and financial risk.

## 1. Market Assumptions



## 2. Portfolio Results



# SD-9 Resource Planning

## Strategic Directive

The Board of Directors recognizes that the District will have to adapt to the rapidly changing electric utility business environment. The OPPD resource planning process will provide the resources and analytical capability to adequately assess OPPD's Integrated Resource Portfolio (or Supply and Demand Portfolio) to ensure reliable, competitive, cost-effective and environmentally sensitive service for our customers.

To attain this goal, OPPD shall:

- Periodically assess, for strategic and integrated resource plans, OPPD's mix of generation assets, demand-side management programs, purchased power agreements and renewable energy resources.
- Utilize multiple scenarios to properly evaluate the range of risks posed by varying future assumptions such as, but not limited to fuel costs, economic growth, regulations and emerging technologies.
- **Ensure all integrated resource strategic plans support and align with OPPD's Strategic Directives.**

## Ensure all integrated resource strategic plans support and align with OPPD's Strategic Directives.

The planning process considers the diverse and unique requirements of the following Strategic Directives and embraces the competing interests and tradeoffs that must be made when making resource decisions:

- SD-2: Rates
- SD-4: Reliability
- SD-5: Customer Satisfaction
- SD-7: Environmental Stewardship
- SD-9: Resource Planning
- SD-11: Economic Development
- SD-13: Stakeholder Outreach and Engagement
- SD-15: Enterprise Risk Management

# Recommendation

- The System Management Committee has reviewed and accepted this Monitoring Report for SD-9 and recommends that the Board find OPPD to be sufficiently in compliance with Board Policy SD-9.



# Board Action

## BOARD OF DIRECTORS

August 11, 2020

### ITEM

SD-9: Resource Planning – Monitoring Report

### PURPOSE

To ensure full Board review, discussion and acceptance of SD-9: Resource Planning – Monitoring Report

### FACTS

- a. The Board confirmed the Corporate Governance Initiative Charter in December 2014, in order to assess and refine OPPD’s corporate governance infrastructure.
- b. The first set of Board policies was approved by the Board on July 16, 2015. A second set of Board policies was approved by the Board on October 15, 2015. A third set of Board policies was approved by the Board on November 16, 2017.
- c. Each policy was evaluated and assigned to the appropriate Board Committee for oversight of the monitoring process.
- d. The System Management and Nuclear Oversight Committee is responsible for evaluating Board Policy SD-9: Resource Planning – Monitoring Report on an annual basis.
- e. The System Management and Nuclear Oversight Committee has reviewed SD-9: Resource Planning – Monitoring Report and is recommending that OPPD be found to be sufficiently in compliance with the policy as stated.

### ACTION

The System Management and Nuclear Oversight Committee recommends Board approval of SD-9: Resource Planning – Monitoring Report.

RECOMMENDED:

/s/ L. Javier Fernandez

L. Javier Fernandez  
Vice President and CFO

APPROVED FOR BOARD CONSIDERATION:

/s/ Timothy J. Burke

Timothy J. Burke  
President and CEO

Attachment: Exhibit A – Monitoring Report  
Resolution