

# 2017 Integrated Resource Plan Update

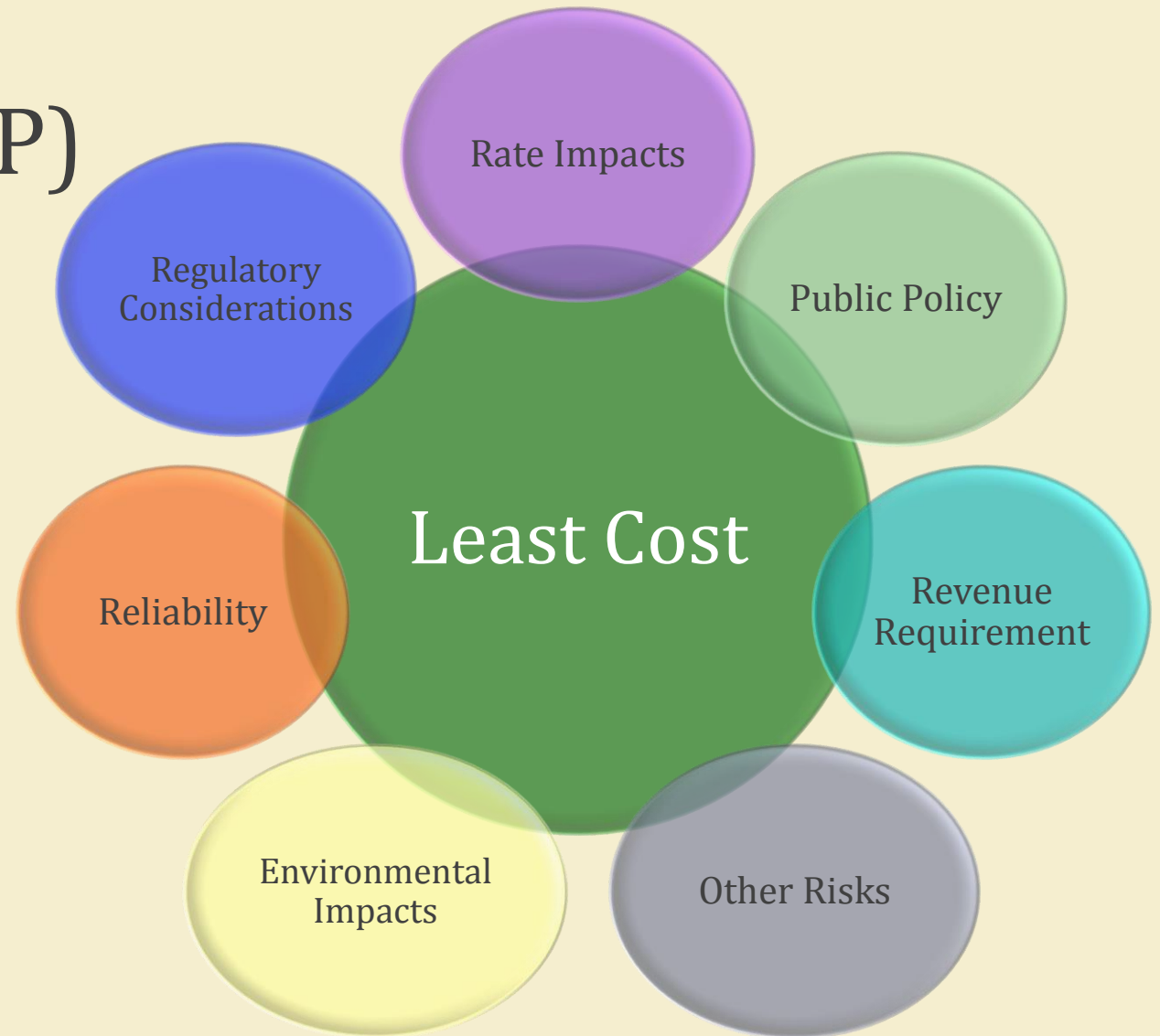
General Manager's Briefing  
February 21, 2017





# Goal of Integrated Resource Planning (IRP)

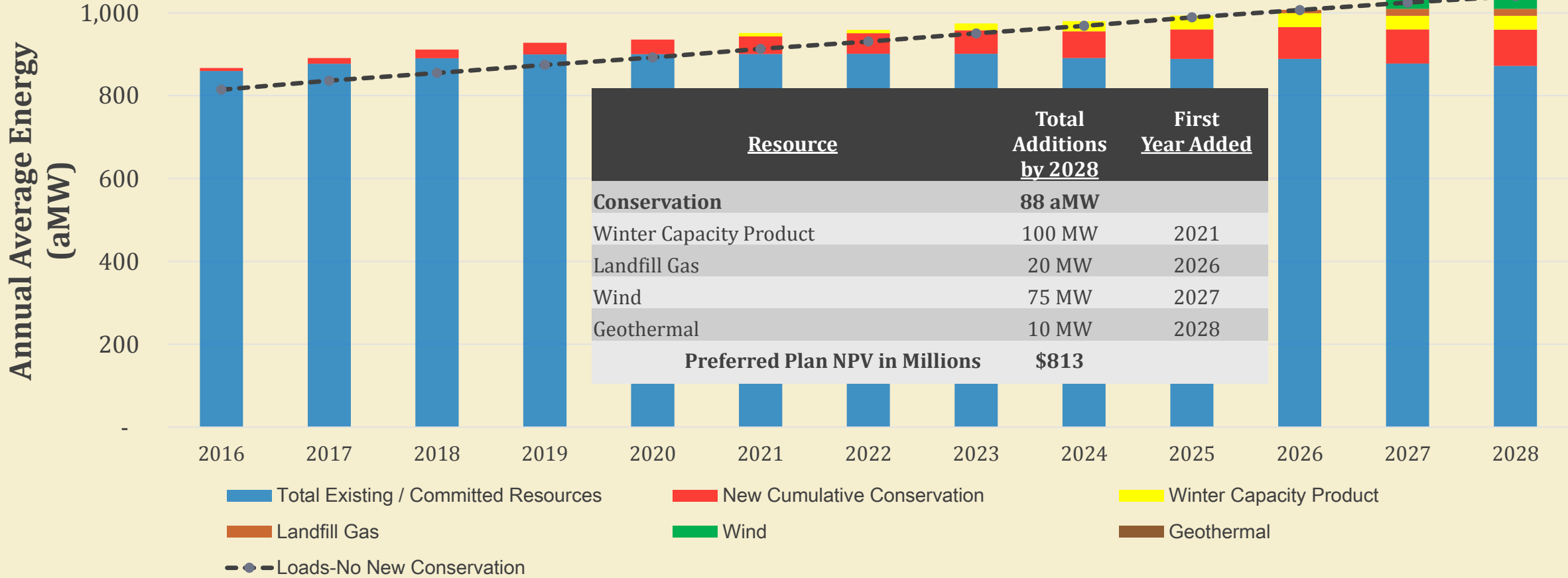
Identify the least-cost mix of supply-side and demand-side resources, that meet the District's future load growth over the long-term planning horizon, while satisfying established planning standards.



# 2015 Preferred Plan

Net Annual Energy Position in aMW  
(Hydro at Critical Water)

- ✓ Winter Need beginning in 2021
- ✓ Annual Energy Need in 2024



# 2016-2017 Biennial Conservation Target

The District's Conservation Potential Assessment (CPA) in 2015 resulted in:

	<b>2-Year Biennial Target 2016-2017</b>	<b>10-Year Achievable Potential 2016-2025</b>
<b>2015 IRP Base Case</b>	14.04 aMW (122,990 MWh)	71.17 aMW (623,449 MWh)
<b>2013 IRP Base Case</b>	13.3 aMW (116,508 MWh)	73.1 aMW (640,356 MWh)

# Progress against 2015 IRP Action Plan

## Continuation from 2013 IRP

- ✓ Pursue all cost-effective energy conservation measures.
- ✓ Continue District's demand response initiative.
- ✓ Continue to evaluate benefits of energy storage (MESA).
- ✓ Participate in regional forums/assess impacts associated with climate, carbon and renewable portfolio standards.

## New Adds to 2015 Update

- ✓ Address portfolio resiliency.
- ✓ Expand portfolio modeling capabilities to assess risk and uncertainty.
- ✓ Conduct evaluation of BPA power product switch for 2020-2028 period.
- ✓ Participate in development of NWPP Energy Imbalance Market.
- ✓ Explore procuring up to 100MW of Winter Capacity Product.
- ✓ Evaluate pumped hydro potential in PUD service area.

*2015 Update to the 2013 Integrated Resource Plan*

*Study Period  
2018-2037*

# 2017 Integrated Resource Plan

## Steering Committee:

Craig Collar, CEO/GM

Tom DeBoer, AGM - Power, Rates, Generation, Transmission

Jim West, AGM - Customer & Energy Services

Glenn McPherson - CFO Finance

Anne Spangler - General Counsel

Jessica Matlock - Government Affairs

Brian Booth – Sr Mgr Rates, Economics & Energy Risk Mgr

Michael Owens - Sr Mgr Customer Strategy, Analytics & Planning

Christoph Enderlein, SEPA Official

## Technical Team:

Tom DeBoer, AGM

Anna Berg, Power Supply

Brian Booth, Rates, Economics & ERM

Dan Liska, Planning

Garrison Marr, Power Supply

Jessica Mitchell, Strategic Segments

Dawn Presler, Generation

Aaron Swaney, Corp Communications

Brenda White, Government Affairs

Zac Yanez, Power Supply

# State Requirements for the IRP

**“... analysis describing the mix of generating resources and conservation and efficiency resources that will meet current and projected needs at the lowest reasonable cost to the utility and its ratepayers...” (RCW 19.280)**

## **General Requirements (RCW 19.280.030):**

- Evaluate a range of load forecasts.
- Assess commercially available conservation and renewable resources.
- Evaluate renewables, non-renewables and conservation using “lowest reasonable cost” criterion.
- Assess how plan will address renewable integration and overgeneration events.
- Integrate into a long-range assessment and describe the mix of supply side resources and conservation resources that will meet current and projected needs.
- Detail a short term action plan.



# Requirements (continued)

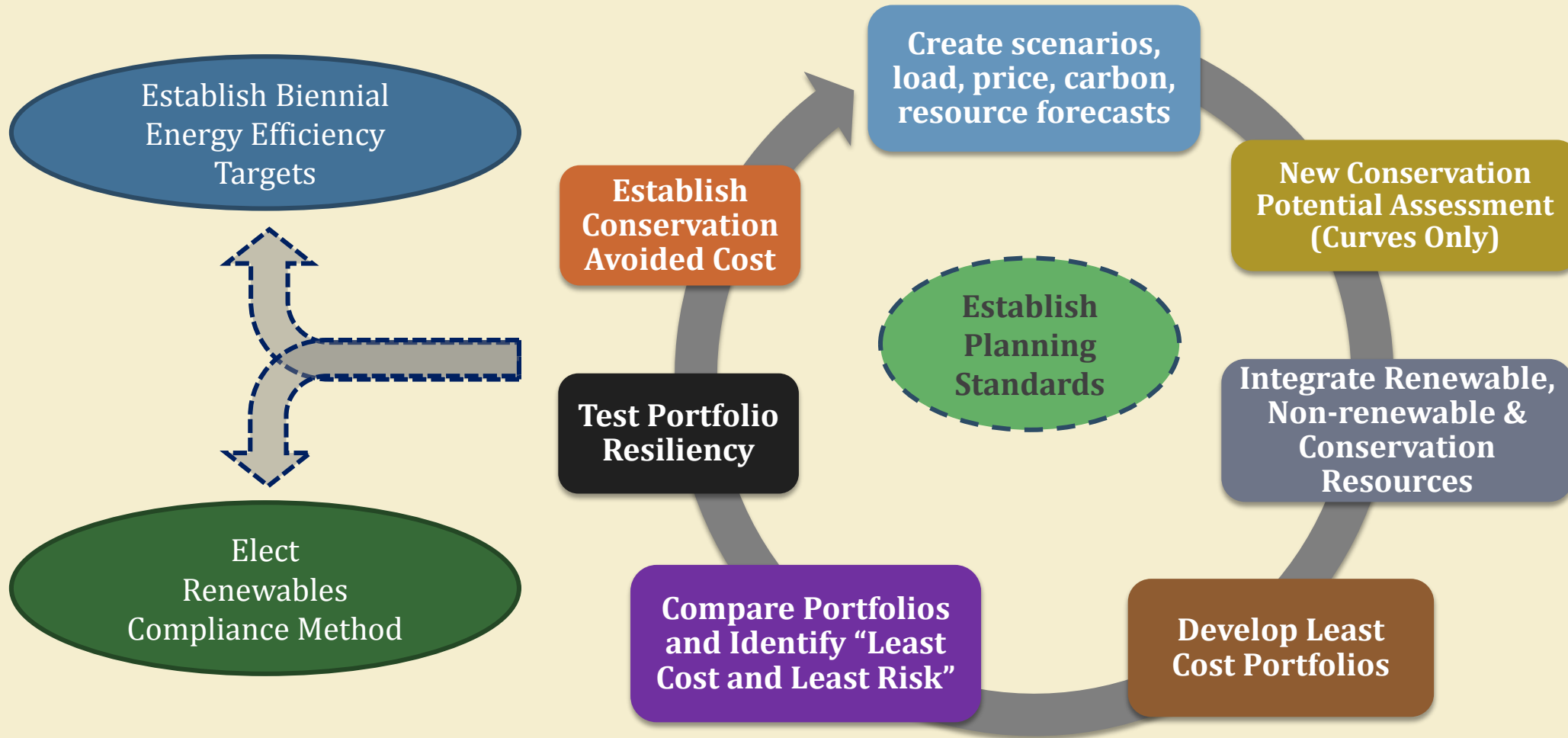
## **Regulatory Requirements:**

- ✓ **Comprehensive IRP every four years; progress report or update every two years.**
  - ❑ Impact to oversupply must be considered for resource additions in the IRP, if any.
  - ❑ Public hearing must be held to adopt the IRP.
  - ❑ Must file with Department of Commerce by August 31 (in the even years).
- ✓ **Utility-specific analysis must be conducted every two years to establish biennial conservation target.**
  - ❑ Biennial target for 2018-2019 and 10-year potential estimate must be filed with Commerce by December 31, 2017.
  - ❑ Public hearing must be held to adopt the biennial target.
- ✓ **EIA Renewables Compliance Method:**
  - ❑ By January 1 each year, PUD must elect renewables compliance method.
  - ❑ Must file report with Commerce by June 1, 2017 each year.

# Questions explored in the 2017 IRP

- 1. Can a probabilistic modeling approach enhance the District's long-range planning efforts? Better identify meaningful planning standards?**
- 2. What is the first year of District resource need? What is driving that need?**
- 3. What mix of supply and demand-side resources best reduces the cost of meeting future needs?**
- 4. What amount of new conservation is cost-effective over the study period?**
- 5. What are the cost/risk trade offs based on policies and risk tolerance?**

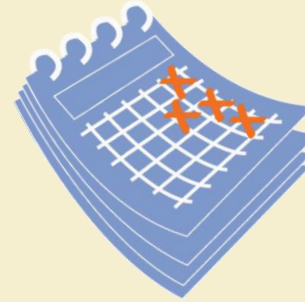
# 2017 IRP Process



# Future Steering Team Topics



# Tentative Schedule



April 2017

Finalize scenarios and sensitivities, forecasts for load, natural gas, carbon, market prices.

Summer 2017

Briefing on portfolios and sensitivities.

September 2017

Publish draft IRP and conduct SEPA process.

Late Fall 2017

Schedule Board public hearing for adoption of 2017 IRP and Conservation biennial targets for 2018/19.

# Questions?

