

AGENDA
BENTON COUNTY PUBLIC UTILITY DISTRICT NO. 1
SPECIAL COMMISSION MEETING

CLEAN ENERGY IMPLEMENTATION PLAN

Tuesday

August 24, 2021

8:15 a.m.

2721 West 10th Avenue, Kennewick

The meeting is open to public attendance via telephonic means.

The conference call line is:

1-469-998-5874

Conference ID: 470 402 792#

1. Pledge of Allegiance

2. Welcome and Introductions
President Lori Sanders

3. Presentation
Kevin White/Paul Durham

4. Commission Questions and Discussions

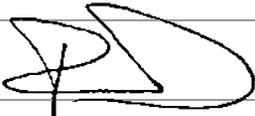
5. Public Comments – Open

6. Adjournment



- Business Agenda
- Second Reading
- Consent Agenda
- Info Only/Possible Action
- Info Only

COMMISSION MEETING AGENDA ITEM

Subject:	Clean Energy Implementation Public Meeting #2	
Agenda Item No:		
Meeting Date:	August 24, 2021	
Presented by:	Kevin White / Paul Durham	<i>Staff Presenting Item</i>
Approved by (dept):	Kevin White	<i>Director/Manager</i>
Approved for Commission review:	Rick Dunn 	<i>General Manager/Asst GM</i>

Motion for Commission Consideration:

None

Recommendation/Background

The Clean Energy Transformation Act (CETA) was enacted in 2019 and established clean energy requirements including no coal-fired resources by the end of 2025, greenhouse gas neutral by 2030, and 100% carbon-free by 2045. In addition to the clean energy requirements, CETA established additional planning requirements to the Integrated Resource Plan process and a new planning document called the Clean Energy Implementation Plan (CEIP). The CEIP must propose interim targets for energy efficiency, demand response and renewable energy as well as actions to ensure an equitable transition to the state’s carbon-free energy goals. Targets must be consistent with a utility’s long-range, integrated resource plan and resource adequacy requirements. The first CEIP is due to the department of commerce by January 1, 2022. Public participation in the CEIP process is required under CETA and holding two Public Meetings provides a public input process and comment period for the draft CEIP in advance of the Commission adopting the final CEIP in Q4 2021.

Summary

The second CEIP public meeting will provide a brief recap of the CEIP process/requirements and provide staff’s recommendation for the remaining three of five main components of the CEIP.

Fiscal Impact

None

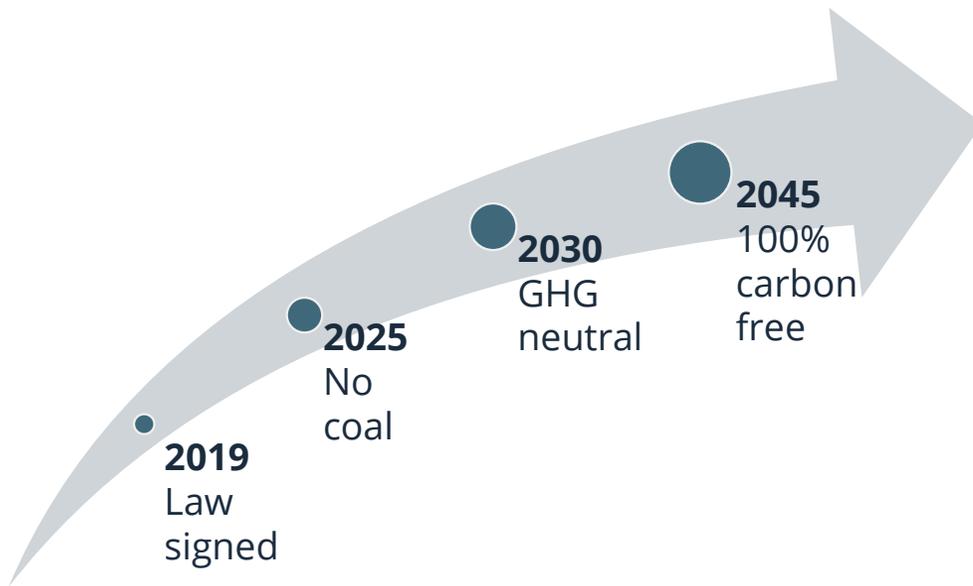


Clean Energy Implementation Plan

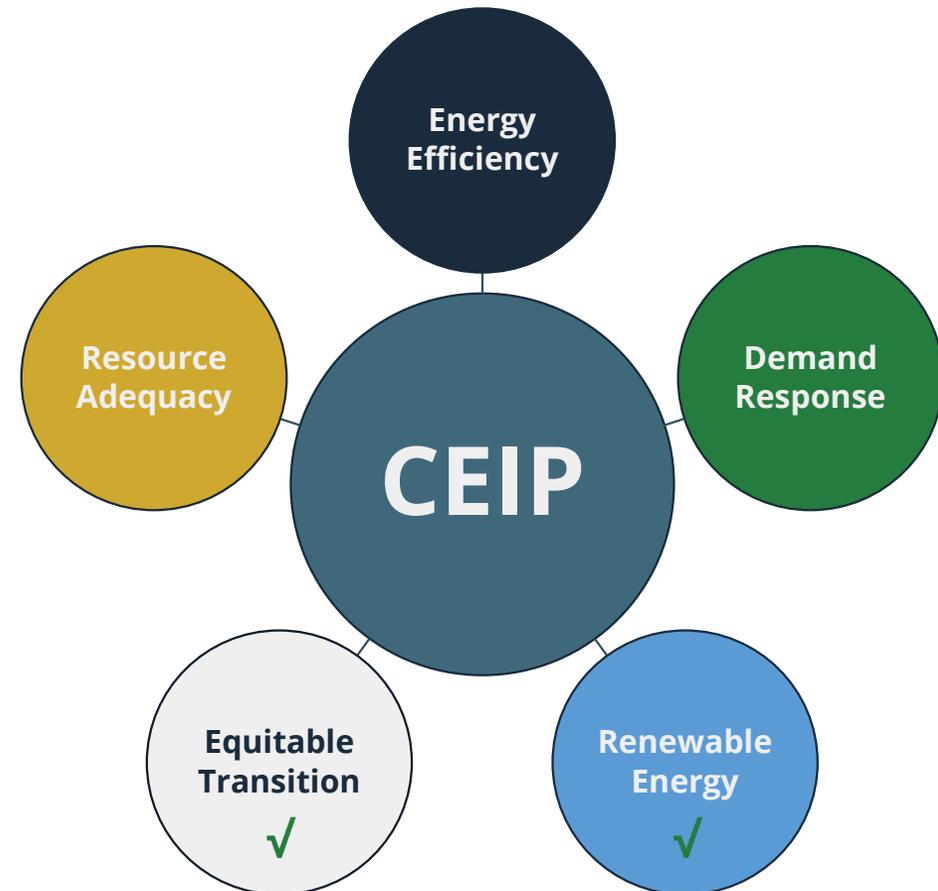
August 24, 2021

Recap Meeting #1

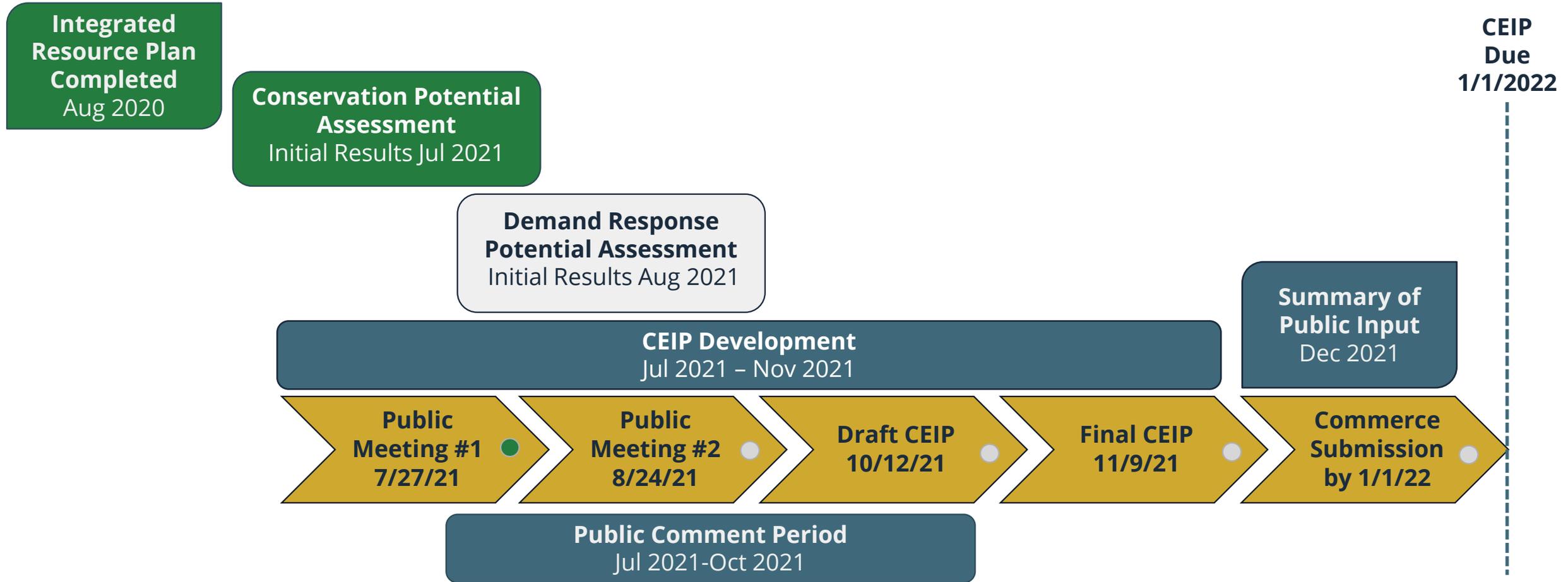
Clean Energy Transformation Act (CETA)



Clean Energy Implementation Plan (CEIP)



Clean Energy Implementation Plan Timeline



● Completed

● Incomplete

Today's Focus Areas

Energy Efficiency

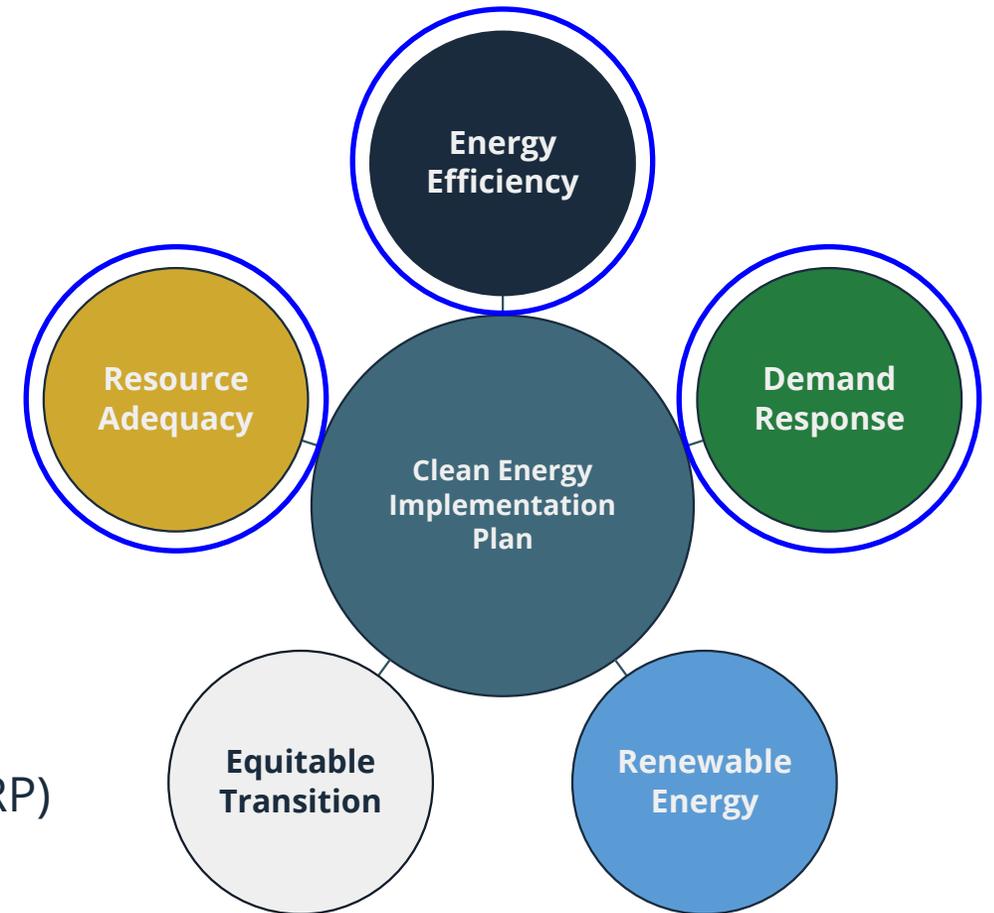
- Conservation Potential Assessment (CPA) Initial Results
- Target recommendation

Demand Response (DR)

- Overview and DR Program Timeline
- Target recommendation

Resource Adequacy (RA)

- Review metrics aligned with the Integrated Resource Plan (IRP)
- Standards recommendation

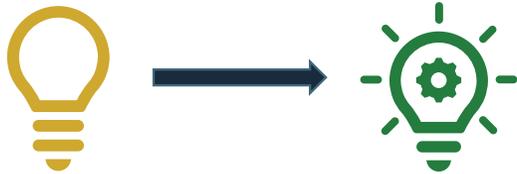


Energy Efficiency

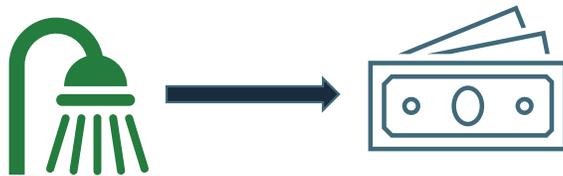
Energy Efficiency in CETA

What is energy efficiency?

Should be simply understood as using less energy to perform the same task



Change to Efficient Bulbs



Heat-Pump Water Heaters



What does the CEIP require for EE?

The target must identify the megawatt-hours (MWh) of the first-year of savings to be acquired in the interim period (2022-2025)

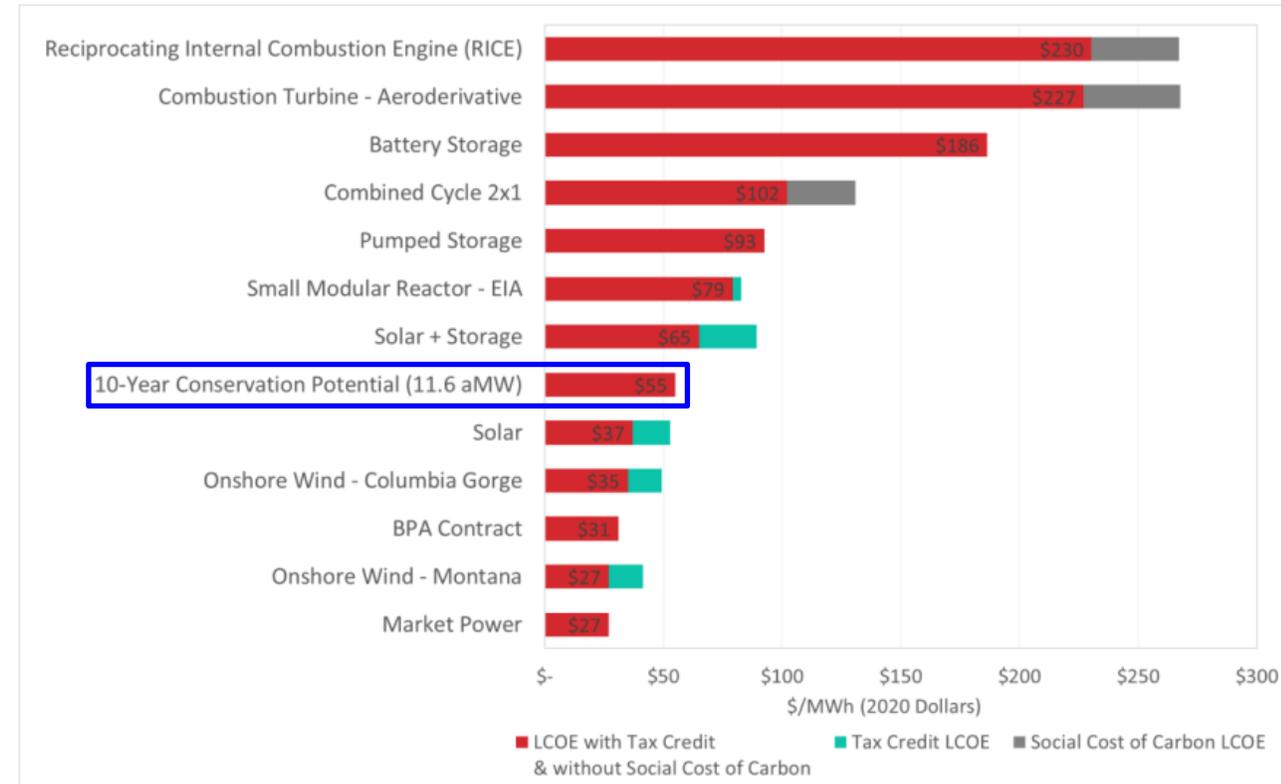
Energy Efficiency in the Energy Independence Act

Energy Efficiency is considered one of the more cost-effective resources in a utility's portfolio

How is EE currently implemented under EIA?

The Energy Independence Act¹ (EIA) states that utilities will identify their achievable cost-effective conservation potential through an assessment conducted every two years

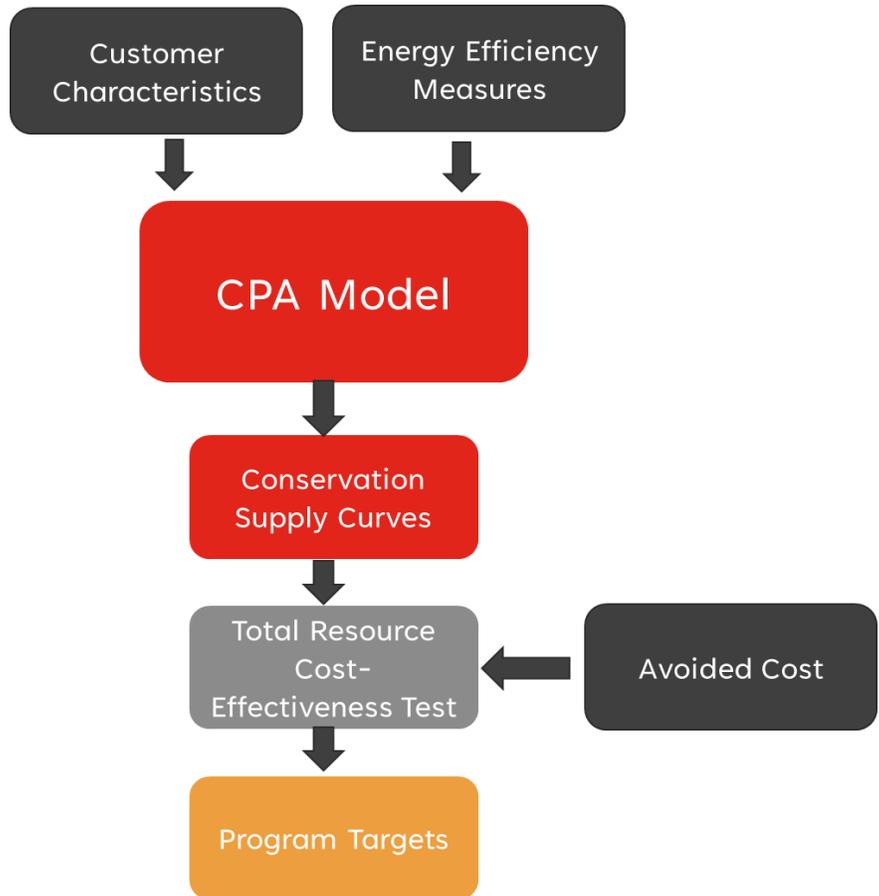
Benton plans to utilize the Conservation Potential Assessment (CPA) to meet CETA² requirements



1 - RCW 19.285.040 EIA Conservation <https://app.leg.wa.gov/RCW/default.aspx?cite=19.285.040>

2 - RCW 19.405.40 CETA Legislation <https://app.leg.wa.gov/RCW/default.aspx?cite=19.405.040>

Conservation Potential Assessment



Benton PUD completed its initial assessment in **July 2021** and currently refining the modeling

What were the initial assessment results?

Table ES-1
Cost Effective Potential (aMW)

	2-Year	4-Year	10-Year	20-Year
Residential	0.30	0.77	3.01	6.30
Commercial	0.85	2.06	6.90	14.96
Industrial	0.31	0.59	1.21	1.52
Distribution Efficiency	0.03	0.10	0.44	1.24
Agricultural	0.04	0.08	0.16	0.18
Total	1.52	3.59	11.72	24.20

$3.59 \times 8760 \text{ hours per year}$
 $= 31,448 \text{ MWh}$

Staff Recommendation – Energy Efficiency

District staff recommends the following target:

- Utilize the target of **31,448 MWh (3.59 aMW)** over the four-year interim period (2022-2025)

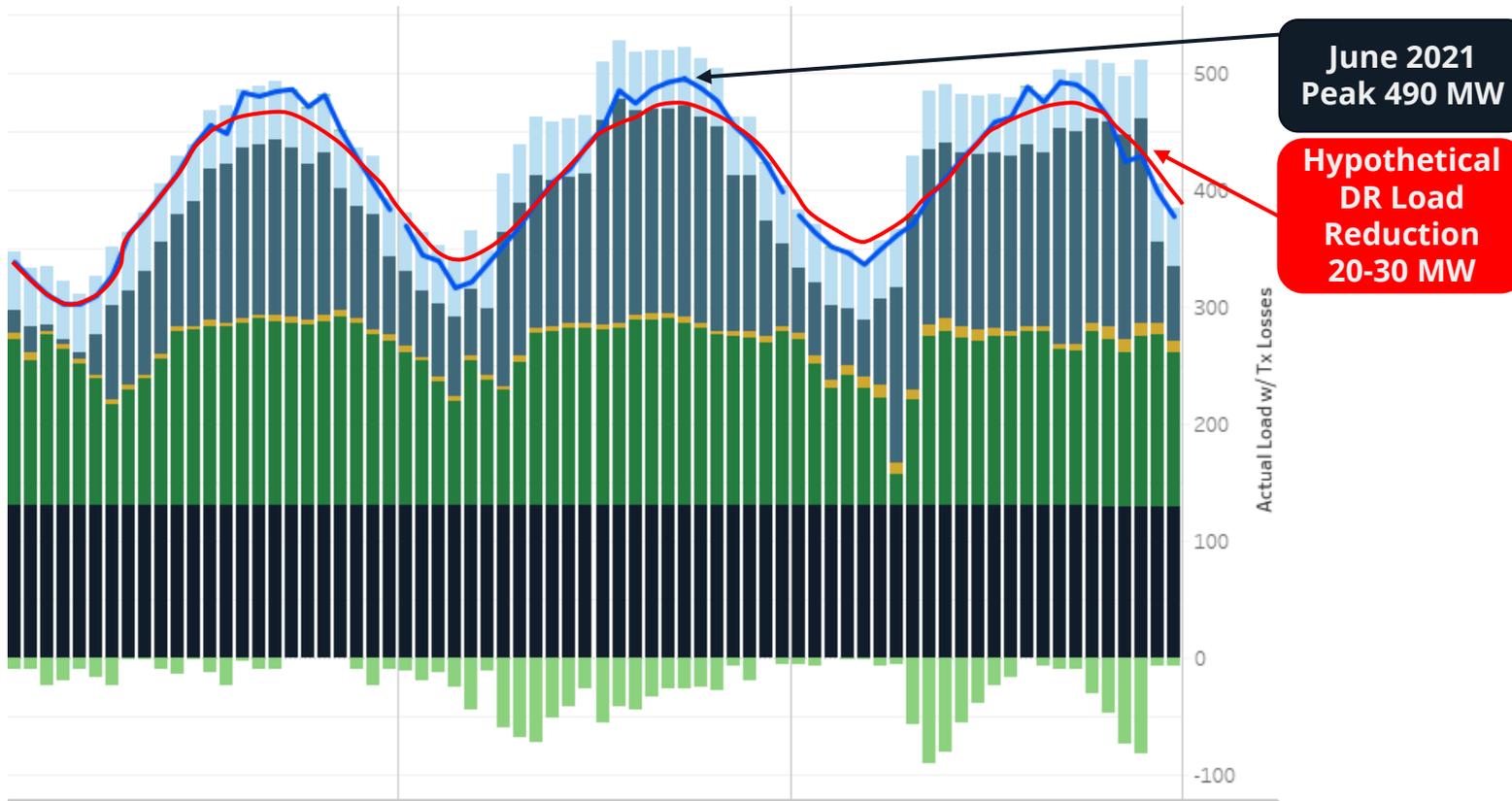
Factors influencing staff's recommendation:

- Aligned and complies with Energy Independence Act (EIA) requirements
- Considers the value of conservation against resource costs
- Effective in assisting the District in meeting its 2030 and 2045 CETA compliance

Demand Response

Demand Response

What is Demand Response (DR)? The voluntary or temporary reduction in consumers' use of electricity



Types of Demand Response



Heating and Cooling



Smart Water Heaters



Automation in Commercial and Industrial Sectors



Voluntary Irrigation Reduction

Demand Response in CETA

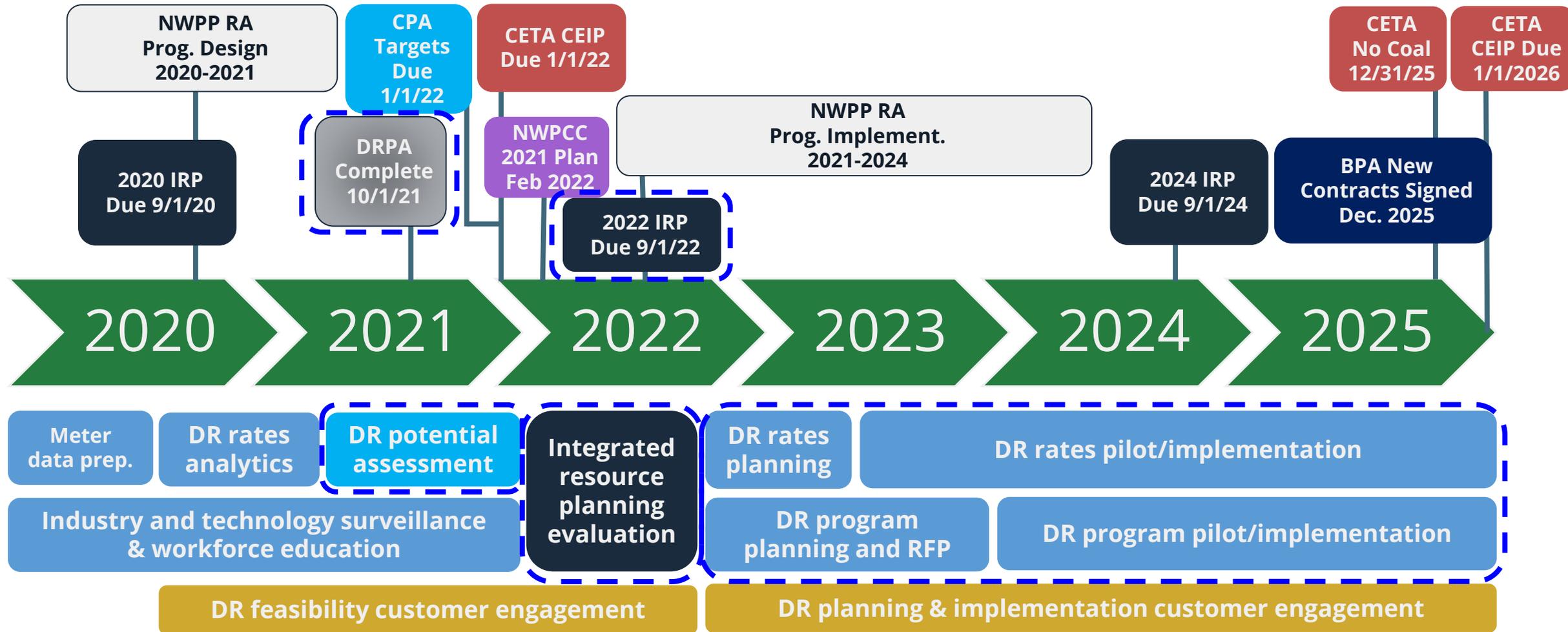
What does the CEIP require for Demand Response?

The target must identify the MW amount of DR resources to be acquired during the interim period (2022-2025)

What is the District's current status with DR programs?

- No current active DR programs implemented
- District has an expected program timeline

Timeline of a Path Forward for Demand Response



Note: CEIP = Clean Energy Implementation Plan, CPA = Conservation Potential Assessment, DRPA = Demand Response Potential Assessment, IRP = Integrated Resource Plan, NWPPCC = Northwest Power and Conservation Council, RFP = Request for Proposal. ** TIMELINE IS PRELIMINARY FOR FACILITATING ADDITIONAL PLANNING DISCUSSION **

Demand Response Potential Assessment

Consultant is currently developing Benton PUD's initial assessment

What is considered in the assessment?

- Projected amount of resources locally that could be called on for DR
- The capable application of various DR technologies/devices
- Economically feasible DR solutions

Staff Recommendation – Demand Response

District staff recommends the following target:

- Utilize the target of **0 MW** of DR over the four-year interim period (2022-2025)

Factors influencing staff's recommendation:

- Proper evaluation of DR potential assessment results in Integrated Resource Plan needed
- Major recruitment of customers required once cost-effective programs are determined
- A large lift in technology may be required dependent on type of program implemented
- Final development of potential DR programs late in the interim period
- BPA's 2020 Resource Program indicated DR was not a part of BPA's least-cost portfolio

Resource Adequacy

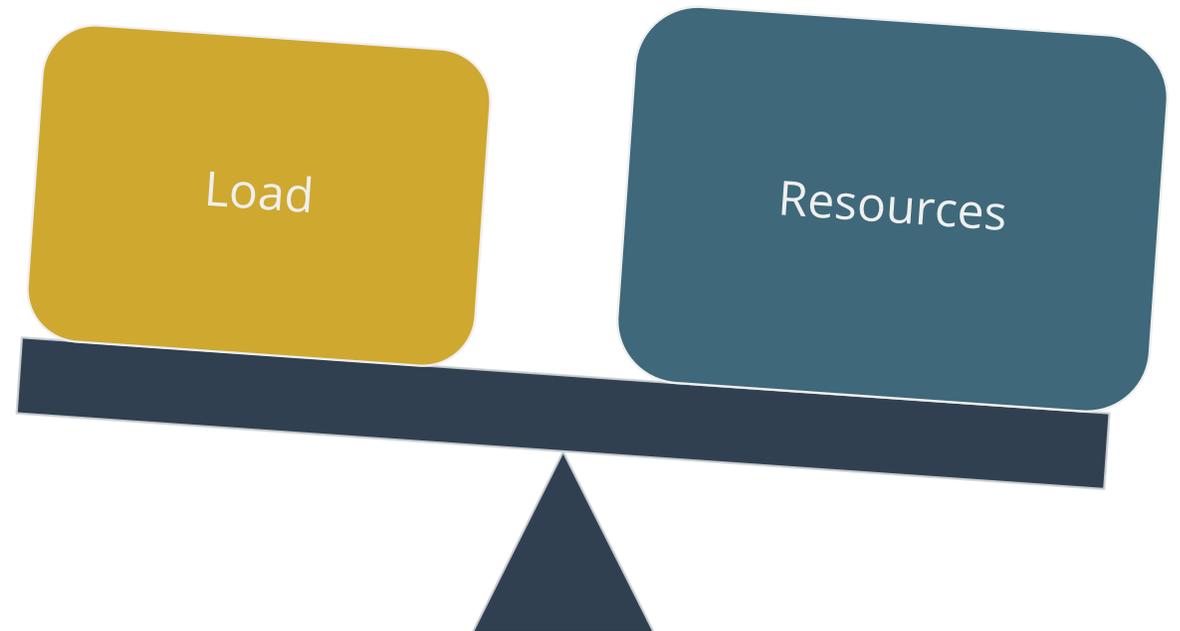
Resource Adequacy

What is Resource Adequacy?

The measurement of sufficient resources (supply) to meet customer energy needs (demand/load) for all hours over a specified period of time

Why is this important?

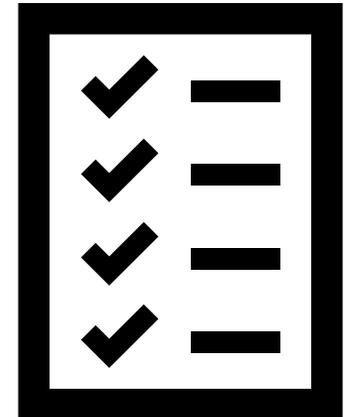
- Ensures customers' electricity needs are met
- Assesses how effective different resource types are at providing electricity at peak times



Resource Adequacy

What does the CEIP need to include for RA?

- Must identify the RA standard used by the utility
- Identify any methods of measurement and resource contribution
- Must be informed by the utility's Integrated Resource Plan (IRP)¹



Integrated Resource Plan (IRP)

What metrics does the district utilize to analyze load in the IRP?

- Use a statistical method to analyze historical load (2011-2020)
- Examined the historical Winter (Dec-Feb) and Summer (Jul-Aug) aHLH and single hour peak values
- Utilized the **99th percentile** from history to plan for average heavy load hour (**aHLH**) load and peak planning
- Utilized the Annual Average Growth Rate (AARG) to grow the load values to 2030

Peak Load (aMW)			
	Load 50th	Load 50th * 1.12	Load 99th
Winter Average HLH	195	219	303
Winter Peak	218	244	333
Summer Average HLH	298	334	376
Summer Peak	339	380	423
2030 Peak Load (aMW)			
10 Year AARG	0.17%	0.17%	0.17%
Winter Average HLH	199	222	309
Winter Peak	222	249	339
Summer Average HLH	303	340	382
Summer Peak	345	386	430

2020 Integrated Resource Plan, Figure 39: Peak Load Scenarios, Page 58

	Expected Resources			
	Slice	Block	Frederickson	Total Resource
Winter Peak 2021	144	108	50	302
Summer Peak 2021	144	154	50	348
Winter HLH Average 2021	123	108	50	281
Summer HLH Average 2021	123	154	50	327
	Slice	Block	Call Option	Total Resource
Winter Peak 2025	144	108	25	277
Summer Peak 2025	144	154	75	373
Winter HLH Average 2025	123	108	25	256
Summer HLH Average 2025	123	154	75	352

2020 Integrated Resource Plan, Figure 40: Forecasted Peaking Resources, Page 58

What resources are expected to generate during peak timeframes?

- Some resources are more likely to have a greater contribution
 - Hydro, nuclear, and natural gas
- Intermittent resources will have a low contribution
 - Wind and solar

Regional Resource Adequacy Assessment

What regional study evaluates RA and provides additional metrics?

RA studies from the Northwest Power and Conservation Council (NWPCC) resource adequacy assessment conducted in 2019 provided a loss of load probability (LOLP) metric future years

What were the results of the 2019 assessment?

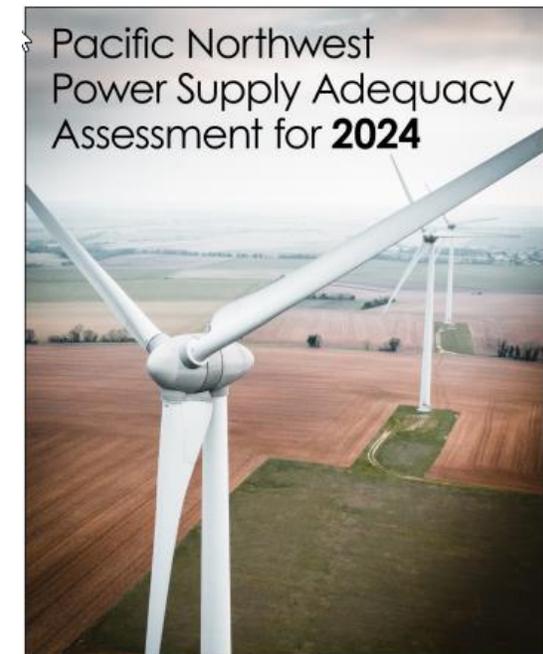
- 2024 LOLP – 8.2% or 12.8% with early coal retirement
- 2026 LOLP – 17.0% or 26.0% with early coal retirement

How does Benton PUD utilize the NWPCC RA study?

- Used as a gauge of regional resource adequacy
- Provides potential trends in power market availability

What are the early indications from the 2021 NWPCC Plan?

- LOLP is improving, but new modeling has been controversial
- Flexibility of hydro generation appears to be overly optimistic
- Increased reliance on imports into the Northwest



Staff Recommendation – Resource Adequacy

District staff recommends the following RA standard(s):

- Utilize the **99th Percentile aHLH Planning Standard** over the four-year interim period (2022-2025)
- Consider RA metrics evolving from the **Northwest Power Pool (NWPP) RA** program
- Monitor NWPCCC's Resource Adequacy assessment results compared to the **5% LOLP RA threshold**

Factors influencing staff's recommendation:

- Utilizing the 99th percentile provides a high confidence in meeting future loads
- Region-wide RA standards and programs are not fully developed (NWPP)

Summary and Next Steps

Review

What topics were covered today?

- Meeting #1 recap
- Energy Efficiency Target
- Demand Response Target
- Resource Adequacy Standards

To provide feedback or view additional resources go to

<https://www.bentonpud.org/About/Planning-Performance/Integrated-Resources-Plan>

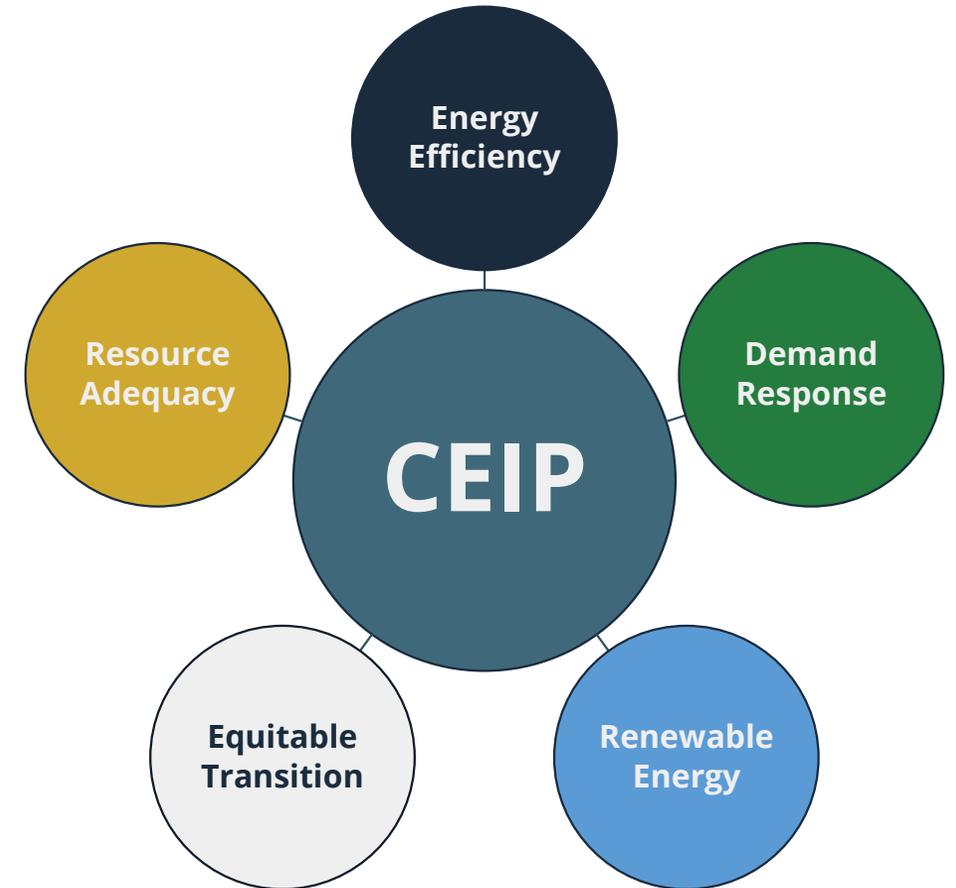
Next Steps in the Process

Public Comment Period

- Remains open through **Oct 22nd**

Clean Energy Implementation Plan

- Draft plan presented to Commission **Oct 12th**
- Final plan presented to Commission for adoption **Nov 9th**



Questions or Comments?

Visit

<https://www.bentonpud.org/About/Planning-Performance/Integrated-Resources-Plan>
for more information.