RATE REDESIGN

- Moratorium on New Large Loads (March 2014 to May 2014)
- Available Power
- Lowered the “Special Contract” threshold from 2.5 MW to 1.5 MW
- Tiered Rates
- Security Deposits
- Reformulated Contribution in aid of Construction (CIAC)

PUBLIC UTILITY DISTRICT NO. 2 OF PACIFIC COUNTY NEW LARGE LOAD POLICY

October 30, 2015

Energy Northwest Public Power Forum

Presentation Topics

- P.U.D. No. 2 of Pacific County Prior to a New Large Load Policy
- Why a New Large Load Policy
- Survey of Other P.U.D.'s
- Options for a New Large Load Policy
- Selection of a 300 kVA Transformer Limit
- Policy Specifics
- One Year Later
- Questions

P.U.D. No. 2 of Pacific County Prior to a New Large Load Policy

- Slice/Block Power Purchase Agreement with Bonneville Power Administration (2028)
  - Tier 1 CHWM of 36.87 aMW (322,981 MWhrs)
- Little Growth
  - 34.89 aMW total purchases from BPA in 2013
  - 1.98 aMW CHWM headroom (17,345 MWhrs)
  - At 0.5% load growth per year, CHWM not reached for another eleven years
  - At 1.0% growth per year, the CHWM would be used up in about six years
  - Mainly residential growth

Why a New Large Load Policy

- Initiative I-502 passed in November 2012
- 44 producers on Liquor Control Board List
- Numerous inquiries from producers of this agricultural crop for electrical service
- One producer would require construction of a transmission line to a new distribution substation with a 30-35 MVA power transformer
  - Double summer demand peak
  - Add one-third of winter demand peak
- With this added load, BPA Tier 1 CHWM will be exceeded in no time

Survey of Other P.U.D.'s

- Asked all Washington PUD Association Members with electrical service for a copy of their New Large Load Policy
- Response from 5 P.U.D.'s
  - 1 at 5 aMW or greater
  - 2 at 500 akW (1 MW) or greater
  - 1 with 500 kVA transformer size
  - 1 at 1 MW or greater
- Provided a starting point for our discussion on this subject

Options for a New Large Load Policy

- Six Options
  - No NLL Policy, Meld Tier 1 and Non-Federal Costs to Develop Retail Rates
  - 300 kW Connected Load or Above
  - 500 kW Connected Load or Above
  - 1 MW Connected Load or Above
  - 2 MW Connected Load or Above
  - All New Loads Retail Rates based on Non-Federal Wholesale Costs

Selection of a 300 kVA Transformer Limit

- Limiting harm to existing customers versus stopping economic development
- Tossed out two extremes
  - Meld all wholesale power costs
  - All new customer retail rates based on non-federal wholesale power
- Next eliminated 1 and 2 aMW load sizes
- Left two options
  - 300 and 500 kW loads

Selection of a 300 kVA Transformer Limit

- Decided on 300 kVA transformer size limit
  - 300 kW at 100% power factor is 300 kVA
  - 300 kVA is a standard sized three-phase transformer with a big jump to 500 kVA as the next standard size
  - Installed transformer size easier to use as threshold than connected load
  - Limits cost increase to existing customers

Policy Specifics

- Principals considered when developing the Policy
  - Tier 1 wholesale power from BPA gone
  - Growth pays for growth
  - Protection for existing customers
  - Able to use existing software
  - Simple in context
    - Application for P.U.D.
    - Understanding for customers
- Elements - New Large Load Policy
  - General
    - New customer classification
    - Tiered retail rate structure
    - Once a New Large Load, always a NLL
    - Customer moving into an existing facility that has been off for more than one year treated as a new customer
    - Each New Large Load customer required to sign a power purchase agreement with the P.U.D. for their retail service

Policy Specifics

- Elements - New Large Load Policy
  - New Load
    - Any customer requiring a 300 kVA transformer or larger
    - Aggregate of transformer kVA for service to buildings on the same or adjacent parcels with meters under the same name
    - New transformer installed to serve multiple customers divided by the number of customers based on individual load to the total
      - If one or all at 300 kVA or greater (NLL)
      - Below 300 kVA existing classification

- Elements - New Large Load Policy
  - Existing Load
    - Customer adding load such that a 300 kVA or larger transformer is required
    - Primary metered customers adding load will be assessed on a case-by-case basis
    - Special contract for those existing customers above 300 kVA adding an additional 300 kVA or more

One Year Later

- Producers Agricultural Load
  - 4575 kVA transformers connected
  - 3025 kVA transformers serving nine grandfathered or below 300 kVA transformer limit customers
  - 1550 kVA transformers serving three NLL customers
- Pending Producers Agricultural Load
  - 500 kVA transformer serving one NLL customer
  - 1000 kVA transformer serving two NLL customers
  - 30-35 MVA power transformer servicing ten NLL customers in development park
- One Seafood Processor Connected under New Large Load Policy
  - Three phase service with 750 kVA transformer (NLL)
- Pending Seafood Processors NLL Ice Plants
  - Two three phase services with 300 kVA or larger transformer

Questions ????

Northern Wasco People's Utility District

The Dalles, Oregon

Voter Approved Formation: 1939

Operational: 1949


NORTHERN
WASCO
COUNTY
PUD

NORTHERN WASCO COUNTY PUD
PEOPLE'S UTILITY DISTRICT

- **Service Territory: 92 Square Miles**
- **Population: 14,000**
- **115KV & 69KV Transmission: 37 Miles**
- **Distribution Substations: 8**
- **Distribution System: 240 Miles (80% overhead)**
- **Power Supply: BPA 65%**
  PUD Owned Hydro 15%
  Market 20%
- **Debt: NONE**


2012/07/20

NORTHERN WASCO COUNTY PUD
PEOPLE'S UTILITY DISTRICT

Power Supply Memberships: 2

a. **NEMS** – NW Energy Management Services
21-member: Co-ops, Munis, PUD's
from OR, WA, ID, WY, NV

b. **UAMPS** – Utah Associated Municipal Power Systems
45 members from UT, CA, ID, NV, NM, OR & WA

Employees: 36 FTE & 15 PTE

Current Customer Base: Total 9,800		Sales
Single Phase:	94%	24%
3 Phase:	4%	3%
Demand:	1%	11%
Primary:	1%	62%

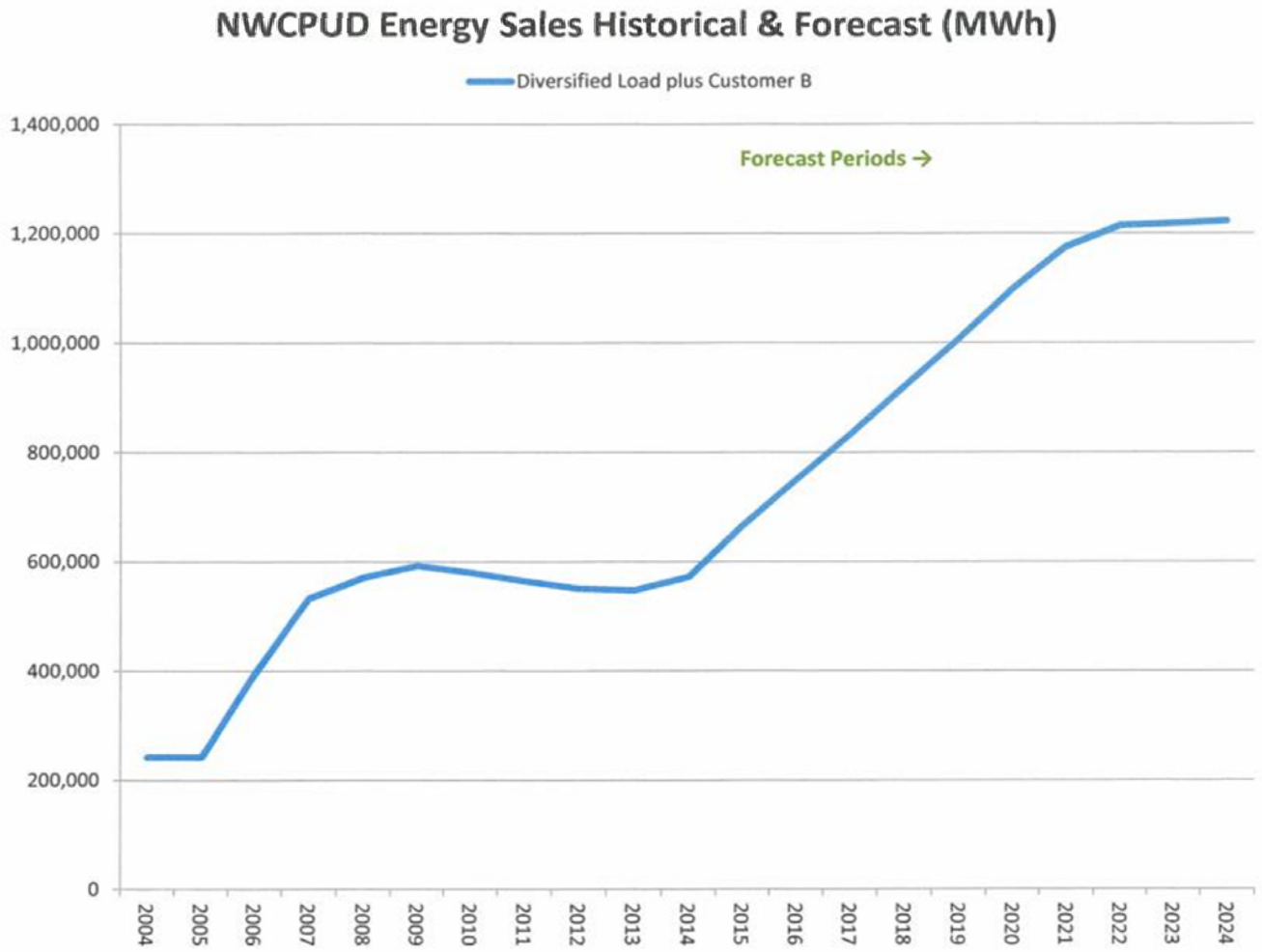
Future Customer Base may Include:

a. Server Farm Growth?

b. Bitcoin Entrepreneurs?

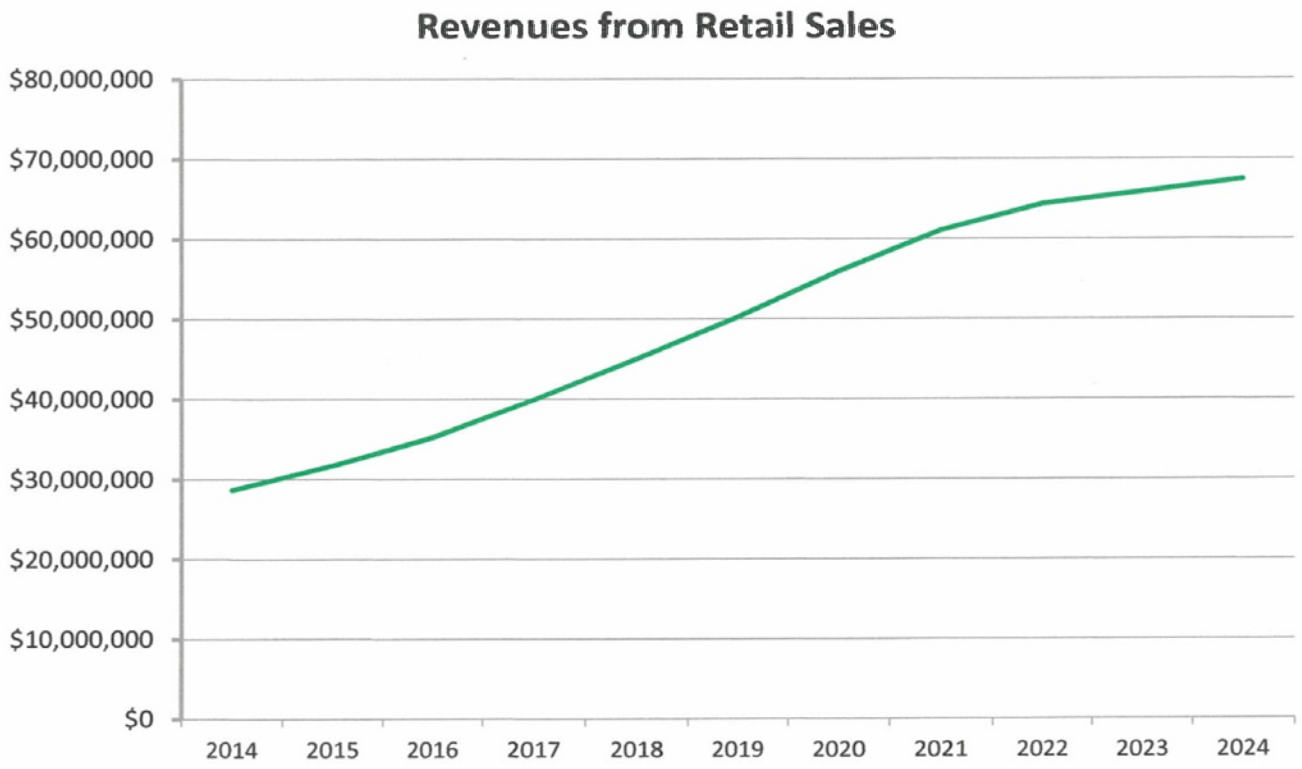
c. Marijuana Grow Operations?

d. ???


NWCPUD Energy Sales Historical & Forecast (MWh)
Diversified Load plus Customer B
Forecast Periods →
1,400,000
1,200,000
1,000,000
800,000
600,000
400,000
200,000
0
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021
2022
2023
2024

Projected Revenues – Base Case

Includes Diversified Load and Customer B Forecasts



Customers Expectations:

Which comes 1st – "Affordability" w/ "Reliability"?

"Reliability" w/ "Affordability"?

At the least – they want "Predictability"

Rate Design and Redesign

Our Design Criteria & Philosophy:

Goals - 1. Maintaining Affordability
2. Protecting Core Customers Economically
3. Maintaining Quality Service Deliverability

Secondary Foundation Principles for Achieving Goals:

A - 1. Complete Economic Risk Mitigations, and
2. Accurate Assessment of Proposed load's Energy needs on System

Primary Foundation Principle

AAA: Successful Identification of all Risks in a changing Industry and Operational Environment