ANNUAL ENERGY PROGRAMS UPDATE

COMMISSION PRESENTATION
MARCH 10, 2020
AGENDA

• Conservation History & Perspective

• 2018-19 Conservation Recap

• 2019 Solar Recap

• 2019 Electric Vehicle Recap

2020 Action items
Cumulative **Regional** Savings, All Mechanisms

- Market Momentum (aMW)
- Federal Standards Savings (aMW)
- State Code Savings (aMW)
- NEEA Alliance Savings (aMW)
- BPA and Utility Program Savings (aMW)

Energy Efficiency

Second Largest Resource After Hydro

Twice Size of Coal
DISTRICT 1982-2019
CONSERVATION ENERGY SAVINGS

CUMULATIVE SAVINGS SINCE 1982 = 36 aMW
- Nearly = 20% of District current annual retail load
- Enough to power nearly 20,000 homes annually

CUMULATIVE SAVINGS SINCE 2010 = 19 aMW
- Nearly = 10% of District current annual retail load
- Enough to power over 10,000 homes annually

EIA Compliance began 2010
LOAD/RESOURCE BALANCE
ANNUAL – CRITICAL WATER

Additional 36 aMW Load if No Conservation since 1980

Additional 19 aMW Load if No Conservation since 2010

Frederickson

Slice

Block

* Retail Load Forecast plus distribution & transmission losses
DISTRICT 2010-2019
CONSERVATION CAPACITY SAVINGS

Figure 17 Summary of seasonal peak day average HLH net position (2023-2029) - monthly

- Cumulative estimated capacity savings from conservation since 2010 = 29 MW

-129 MW aHLH
  Summer deficit if no conservation since 2010

-100 MW aHLH
  Summer deficit

-45 MW aHLH
  Winter deficit

-74 MW aHLH
  Summer deficit if no conservation since 2010
CONSERVATION: OUR LOWEST COST RESOURCE

2018 IRP Results

<table>
<thead>
<tr>
<th>Resource</th>
<th>Levelized $/MWh</th>
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<tbody>
<tr>
<td>Geothermal</td>
<td>$100</td>
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<tr>
<td>Coal</td>
<td>$78</td>
</tr>
<tr>
<td>Solar (W. WA)</td>
<td>$72</td>
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<tr>
<td>Small Modular Reactor</td>
<td>$64</td>
</tr>
<tr>
<td>Wind</td>
<td>$56</td>
</tr>
<tr>
<td>Solar (E. WA)</td>
<td>$54</td>
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<tr>
<td>CCCT</td>
<td>$52</td>
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<tr>
<td>Biomass</td>
<td>$47</td>
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<tr>
<td>Landfill Gas</td>
<td>$42</td>
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<tr>
<td>Conservation</td>
<td>$33</td>
</tr>
<tr>
<td>Market</td>
<td>$26</td>
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</tbody>
</table>

Green bars represent EIA qualifying resources

District Conservation $16 per MWh
Current BPA Power Cost $35 per MWh

Notes:
1. Based on 2018-2019 Actuals
2018-19 EIA CONSERVATION TARGET EXCEEDED

Cumulative Savings Targets vs. Actuals
(Updated monthly)

*Neea includes 2018 actuals and 2019 estimate
DISTRICT 2018-19 CUMULATIVE SAVING

Gross Spending by Sector
(Biennium to Date)

- Agricultural
- Industrial
- Commercial
- Residential

Includes Labor
No BPA Reimbursement

Actual Savings by Sector
(Biennium to Date)
SUCCESSFUL STATE EIA AUDITS

- February 12, 2019 SAO Exit Audits
  - 2017 Renewable compliance
  - 2016-17 Conservation compliance
TRUSTED ENERGY PARTNER
CAN YOU SEE THE PROBLEM?!? 

- Water under home. 
- Insulation falling down.
2019 SOLAR RECAP
Solar Incentive Payments

Year - Sum of Net Metering Payments

THOUSANDS

$1,200

$1,000

$900

$800

$700

$600

$500

$400

$300

$200

$0


$0  $1  $2  $4  $13  $28  $61  $134  $492  $646  $727  $1,031
A RESOLUTION OF THE COMMISSION OF
PUBLIC UTILITY DISTRICT NO. 1 OF BENTON COUNTY, WASHINGTON
INCREASING THE DISTRICT’S NET METERING OF ELECTRICITY CAP
AND
CONTINUING ADMINISTRATION OF THE DISTRICT’S RENEWABLE ENERGY SYSTEM COST
RECOVERY PROGRAM

WHEREAS, The State of Washington has established incentives to promote customer-owned renewable energy generation facilities; AND

WHEREAS, Incentives include Net Metering [RCW 80.60.005 to 80.60.040] and Renewable Energy System Cost Recovery (Incentive Program) [RCW 82.16.110 to 82.16.150]; AND

WHEREAS, RCW 80.60.020 requires the District to make net metering available to eligible customer-generators on a first-come first-served basis until the earlier of either June 30, 2029; or the first date upon which the cumulative generating capacity of net metering systems equals 4.0 percent of the District’s 1996 peak demand which calculates to be 15,120 kilowatts (Net Metering Cap); AND
Production of Customer Renewable Systems (Two Year)

<table>
<thead>
<tr>
<th>Month</th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
<th>Average</th>
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<td>July</td>
<td>24%</td>
<td>20%</td>
<td>24%</td>
<td>24%</td>
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<tr>
<td>August</td>
<td>24%</td>
<td>18%</td>
<td>21%</td>
<td>22%</td>
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<tr>
<td>September</td>
<td>21%</td>
<td>15%</td>
<td>22%</td>
<td>21%</td>
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<tr>
<td>October</td>
<td>12%</td>
<td>15%</td>
<td>15%</td>
<td>14%</td>
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<tr>
<td>November</td>
<td>11%</td>
<td>10%</td>
<td>9%</td>
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<tr>
<td>December</td>
<td>7%</td>
<td>5%</td>
<td>5%</td>
<td>6%</td>
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<tr>
<td>January</td>
<td>3%</td>
<td>6%</td>
<td>5%</td>
<td>5%</td>
</tr>
<tr>
<td>February</td>
<td>13%</td>
<td>14%</td>
<td>7%</td>
<td>12%</td>
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<tr>
<td>March</td>
<td>13%</td>
<td>18%</td>
<td>18%</td>
<td>16%</td>
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<tr>
<td>April</td>
<td>20%</td>
<td>20%</td>
<td>19%</td>
<td>20%</td>
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<tr>
<td>May</td>
<td>23%</td>
<td>22%</td>
<td>21%</td>
<td>22%</td>
</tr>
<tr>
<td>June</td>
<td>21%</td>
<td>23%</td>
<td>24%</td>
<td>23%</td>
</tr>
</tbody>
</table>
COMMUNITY SOLAR CUSTOMER INVESTMENT

Ely
Payback Progress

2019 $81.26
2018 $83.02
2017 $80.20
2016 $85.99

$350
$300
$250
$200
$150
$100
$50
$0
Payback

Cost

$250.00

OLIE
Payback Progress

2019 $80.54
2018 $77.60
2017 $80.42
2016 $36.54

$350
$300
$250
$200
$150
$100
$50
$0
Payback

Cost

$275.00

*Estimate

2016
2017
2018
2019
2019 ELECTRIC VEHICLE RECAP
EV PLAN & RESOLUTION ADOPTED

Benton PUD
Electrification of Transportation Plan
November 12, 2019

RESOLUTION NO. 2521
November 12, 2019

A RESOLUTION OF THE COMMISSION OF
PUBLIC UTILITY DISTRICT NO. 1 OF BENTON COUNTY, WASHINGTON
ADOPTING THE DISTRICT'S ELECTRIFICATION OF TRANSPORTATION PLAN

WHEREAS, the Legislature of the State of Washington passed Substitute House Bill 1512, (SHB 1512) an act relating to the electrification of transportation; AND

WHEREAS, SHB 1512 authorizes the governing body of a public utility district to adopt an electrification of transportation plan and to offer incentive programs in the electrification of transportation; AND

WHEREAS, The Electrification of Transportation Plan, at a minimum, should establish a finding that utility outreach and investment in the electrification of transportation infrastructure does not increase net costs to ratepayers in excess of 0.25%; AND

WHEREAS, SHB 1512 authorizes Public Utility District No. 1 of Benton County (District) to offer incentive programs in transportation electrification for its customers, including the promotion of electric vehicle adoption, and advertising programs promoting the District's services, incentives, or rebates; AND

WHEREAS, in adopting the Electrification of Transportation Plan, the District may consider some or all of the following:

- The applicability of multiple options for transportation electrification across all customer classes;
- The impact of electrification on the District's load, and whether demand response or other load management opportunities, including direct load control and dynamic pricing, are operationally appropriate;
- System reliability and distribution system efficiencies;
- Interoperability concerns, including the interoperability of hardware and software systems in electrification of transportation proposals; and
- Overall customer experience; AND
VEHICLE TYPES & CUSTOMER EDUCATION

VEHICLE TYPES:
- CONVENTIONAL
- HYBRID
- PLUG IN HYBRID
- ALL ELECTRIC

SOURCES OF ENERGY:
- Conventional
  - Gas
- Hybrid
  - Gas
- Plug in Hybrid
  - Gas
  - Electric
- All Electric
  - Electric

CONSUMPTION:
- Conventional
  - Gas
- Hybrid
  - Gas
- Plug in Hybrid
  - Gas
  - Electric
- All Electric
  - Electric

EMISSIONS:
- Conventional
  - Emissions
- Hybrid
  - Emissions
- Plug in Hybrid
  - Emissions
- All Electric
  - No Emissions
$250 ALL-ELECTRIC VEHICLE CUSTOMER REBATE

New All-Electric Vehicle (EV) Rebate Application
Pilot program valid November 12, 2019 through December 31, 2020
or until program funding expires

APPLICATION INSTRUCTIONS
1. Complete Rebate Application
2. Attach a copy of your proof of purchase or lease of an all-electric new EV
   a. Attach a copy of your registration or title
      (attachments must include name, purchase date, address and vehicle make & model)
3. Return application and receipt within 60 days of purchase or lease to:
   Benton PUD, P.O. Box 8270, 2721 W. 10th Ave, Kamloops, WA 99330

CUSTOMER INFORMATION
Applicant Name (please print)  Benton PUD Account #
Phone Number  Cell Phone Number
Property Address  Unit/Apt.  City  Zip
Email Address

REBATE INFORMATION
- New EV automotive purchases must be Benton PUD customer
- New EV automotive rebates available only in Benton PUD service territory
- New EV automotive must be purchased/leased on or after November 12, 2019
- New EV Automotive must be battery electric vehicle and no gasoline engine

New Purchased/Leased EV Automobile - $250 per Vehicle
Rebates will be applied to the customer's Benton PUD account.

EV Automobile Make  EV Automobile Model
EV Automobile Registration #  Date Purchased/leased

By signing below, I certify that all information listed above is true and correct and that my address is in the Benton PUD service territory. I understand that completion of this form does not guarantee my rebate. I acknowledge that Benton PUD's EV Rebate Program is subject to change at any time.

Applicant Signature  Date

23
EV GROWTH SINCE 2016

Washington

- Jun 2016: 17,941
- Dec 2018: 42,542
- Feb 2020: 54,895
- 206% Increase

Benton County

- Jun 2016: 195
- Dec 2018: 466
- Feb 2020: 630
- 223% Increase
LOCAL EV CHARGING STATIONS

Kennewick

7 Plugs 17+ Networks
2020 ACTION ITEMS
2020 ACTION ITEMS

• Begin new EIA Conservation biennium
  • Higher incentives for Windows and Insulation
  • Secure large custom projects
  • Explore targeting similar customer load shapes to District load shapes

• Begin new EIA Renewable 15% 2020 requirement

• Electric Vehicle promotion

• Continue customer engagement & Trusted Energy Partner
QUESTIONS