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July 29, 2014

MEMORANDUM

TO: Council Members

FROM: Charlie Grist

SUBJECT: Bonneville Energy Efficiency Plan Update

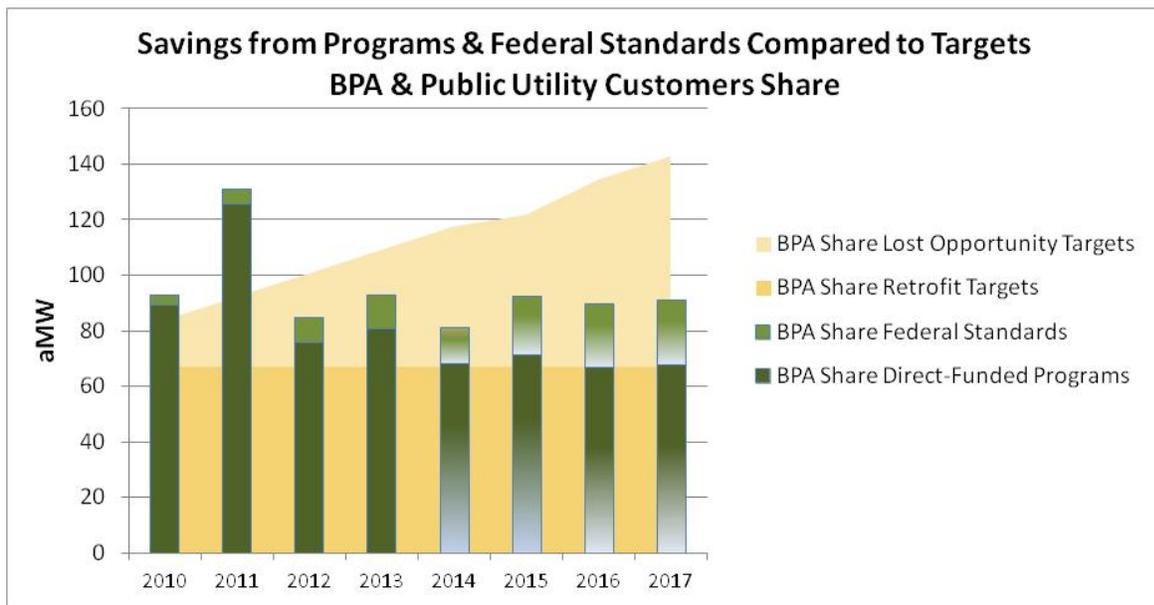
Bonneville will brief the Council on its updated energy efficiency plan for 2015-2017. Richard Genecé, Vice President of Energy Efficiency for Bonneville and Danielle Gidding, Energy Efficiency Planning Specialist, will present Bonneville's recent analysis of accomplished and projected savings. Bonneville will also outline its plans for monitoring progress towards its energy efficiency goals and discuss next steps should savings not materialize as expected.

Bonneville is committed to achieving its share of Council Plan targets and is assessing how best to achieve the Sixth Plan's goal which calls for increasing savings after 2014. As part of that process, Bonneville is updating its energy efficiency plan to cover the period 2015-2017. The plan was last updated in 2012 to cover the period 2010-2014. The energy efficiency plan outlines Bonneville's strategy for helping its utility customers achieve overall conservation targets including the technical and financial resources Bonneville will provide. Bonneville will present its proposed strategy for 2015-2017 at the Council meeting. The agency concludes that it is on track to meet or exceed 2010-2014 savings targets. It also concludes that it has a strong likelihood of meeting increasing efficiency goals in 2015-2017.

The Council's Sixth Plan was not explicit in establishing annual targets after 2014 but the plan's supporting analysis has conservation acquisitions increasing until about

2020 in nearly all futures. Bonneville also estimates its share of the Plan's targets will increase after 2014. Bonneville's cumulative savings goal for the period 2010-2014 is 504 average megawatts of savings. For the period 2015-2017, Bonneville estimates its cumulative target at approximately 400 average megawatts - a roughly 30 percent increase in the rate of acquisition from the current period.

Bonneville identifies three broad categories of savings; direct-funded programs, federal standards and non-programmatic savings. Direct-funded programs include Bonneville-funded programs, utility self-funded programs and NEEA programs. Bonneville forecasts savings from direct-funded programs to remain relatively constant at about 70 average megawatts per year. These programs are forecast to produce a little over 200 average megawatts of savings in the 2015-2017 time frame. In addition, Bonneville's share of federal appliance and lighting standards will produce nearly 70 average megawatts in the 2015-2017 time frame. These two categories make up about two-thirds of the 2015-2017 target. The figure below estimates Bonneville's share of historical and forecast savings from programs and federal standards against Bonneville's share of the Sixth Plan conservation goals.



There are additional sources of savings that contribute to Sixth Plan targets. The remaining sources of savings are categorized as non-programmatic savings by Bonneville. These are savings that occur outside of direct-funded programs or federal standards. The savings are achieved largely through market uptake of efficient products by customers not participating in utility or NEEA programs, although that uptake may have been influenced by past programs. Non-programmatic savings can be verified given sufficient research and analysis. To the extent the non-programmatic savings are measured and documented they count towards the Council's savings targets. However, since non-programmatic savings are based on market movement, their magnitude and timing are largely outside of Bonneville's immediate influence.

Bonneville identified significant non-programmatic savings occurring in 2010-2012 as a result of efficiency improvements in non-residential lamp shipments. For the 2015-2017 period, Bonneville has forecast a range of savings which may occur as a result of non-programmatic activity in lighting and other areas. Under its low non-programmatic savings forecast, Bonneville's total savings fall short of its 2015-2017 conservation targets. In the high non-programmatic savings forecast estimate, BPA exceeds its targets.

Given the uncertainty surrounding the savings estimates and Bonneville's reliance on forecast non-programmatic savings to achieve its energy efficiency goals, it will be important for Bonneville and the Council to closely monitor both programmatic as well as non-programmatic activity over the next few years. The reliance on non-programmatic savings to achieve the region's conservation targets also supports the identification of actions that Bonneville can implement to ensure its 2015-2017 conservation goals are achieved. Richard Genecé will describe these options at the Council meeting.

BPA EE Action Plan Update 2010-2014 and 2015-2017

Northwest Power and Conservation Council
August 5, 2014

Richard Gécécé, BPA
Danielle Gidding, BPA



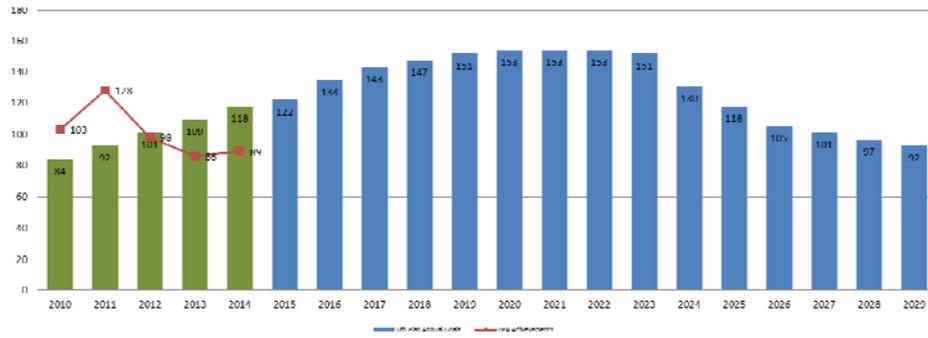
DRAFT

BPA and the 6th Power Plan

- BPA is committed to achieving the public power share of the EE target in the Council's 6th Power Plan
- 504 aMW from 2010-2014

DRAFT 2

6th Plan Annual Savings Goals



504
aMW

BPA Share - 42% of regional target

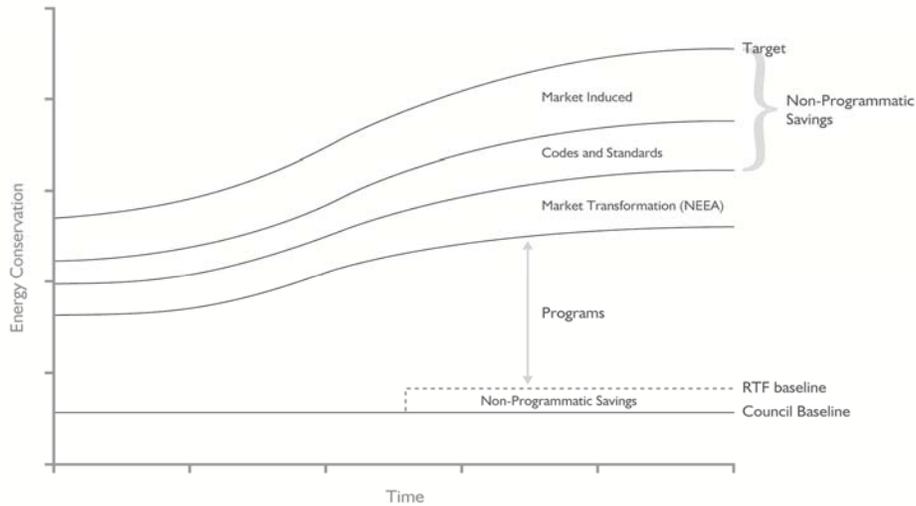
DRAFT 3

Sources of Savings

- Programmatic
 - BPA Funded
 - Self Funded
 - Norpac
- Non-Programmatic
- Federal standards
- Market Transformation (NEEA)
- Carryover
- Baseline Adjustments

DRAFT 4

Non-Programmatic Savings



2010-2014 EE Action Plan

6th Plan Savings Summary (aMW) - 2012 EE Plan

| Savings by funding source | 2010 Actual | 2011 Estimated | 2012 Projected | 2013 Projected | 2014 Projected | Total Savings |
|---|----------------|-------------------|-------------------|-------------------|-------------------|------------------|
| BPA Funded Programmatic Savings | 57 | 105 | 46 | 42 | 39 | 289 |
| Utility Self Funded Savings | 23 | 2 | 16 | 14 | 13 | 68 |
| Norpac | 0 | 0.60 | 6.40 | 0.00 | 4.60 | 12 |
| Market Transformation (NEEA) | 11 | 11 | 8 | 8 | 8 | 46 |
| Non-Programmatic | 15 | 14 | 14 | 14 | 13 | 70 |
| Carryover | 0 | 0 | 11 | 11 | 11 | 34 |
| Total Annual Savings | 106 | 132 | 102 | 89 | 89 | 518 |
| Total Reported 6th Plan Savings* | 103 | 128 | 98 | 86 | 89 | 504 |

*adjusted for savings with a 1-year measure life

EE Plan Update

- BPA and public power utilities are on track to exceed the public power share of the council target
 - Higher than expected achievements in non-programmatic savings
 - Slightly higher than estimated achievements in total program savings
 - Self-funded savings achievements in line with forecast

DRAFT 7

2010-2014 Savings Actual and Projected

6th Plan Savings Summary (aMW) - Adjusted and Updated for Actuals

| Savings by funding source | 2010 Actual | 2011 Actual | 2012 Actual | 2013 Actual | 2014 Projected | Total Savings |
|---|----------------|----------------|----------------|----------------|-------------------|------------------|
| BPA Funded Programmatic Savings | 51 | 111 | 47 | 45 | 41 | 295 |
| Utility Self Funded Savings | 28 | 3 | 12 | 26 | 14 | 84 |
| Norpac - BPA Funded | 0 | 1 | 6 | 0 | 4 | 10.4 |
| Norpac - Cowlitz PUD Funded | 0 | 0 | 1 | 0 | 1 | 1.9 |
| Market Transformation (NEEA)** | 10 | 10 | 10 | 10 | 9 | 48 |
| Non-Programmatic | 14 | 22 | 37 | 26 | 27 | 126 |
| Baseline Adjustments | | | | | | 9 |
| Total Annual Savings | 103 | 148 | 112 | 107 | 95 | 574 |
| Total Reported 6th Plan Savings* | 100 | 144 | 109 | 104 | 95 | 561 |
| Carryover | | | | | | 34 |
| Total Annual Savings | 103 | 148 | 112 | 107 | 95 | 613 |
| Total Reported 6th Plan Savings* | 100 | 144 | 109 | 104 | 95 | 595 |

* adjusted for savings with a 1 year measure life

**NEEA net-market effects

DRAFT 8

2015-2017 Savings Goals

- BPA in process of setting annual savings goals for 2015-2017
 - Public power share of annual savings goals identified in 6th Plan

BPA Annual Goals (aMW)

| | 2015 | 2016 | 2017 | Total |
|-----------------------|------|------|------|------------|
| Annual Savings | 122 | 134 | 143 | 400 |

DRAFT 9

2015-2017 Savings Estimates

- Initial forecast projects a range of savings around annual goals

6th Plan Savings Summary (aMW) - 2015-2017 - Annual Goals

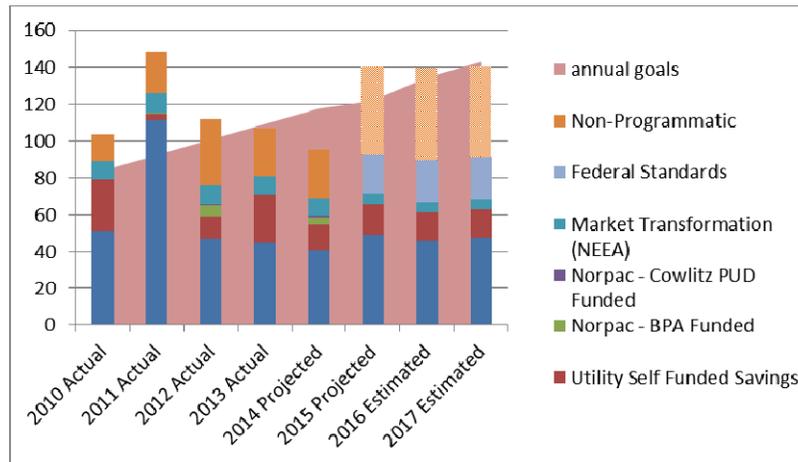
| | 2015 | 2016 | 2017 | Total Savings |
|--|------------|------------|------------|---------------|
| Savings by Source | | | | |
| BPA Funded Programmatic Savings | 49 | 46 | 47 | 143 |
| Utility Self Funded Savings* | 16 | 15 | 16 | 48 |
| Market Transformation (NEEA)** | 6 | 6 | 5 | 16 |
| Federal Standards Adjustment | 21 | 23 | 23 | 67 |
| Non-Programmatic - Mid | 48 | 50 | 49 | 146 |
| Total Savings | 140 | 139 | 140 | 420 |
| Non-Programmatic - Low | 27 | 29 | 30 | 86 |
| Total Savings | 120 | 119 | 121 | 360 |
| Non-Programmatic - High | 68 | 70 | 68 | 207 |
| Total Savings | 161 | 160 | 160 | 480 |

*assumes 25% self funding

**NEEA net-market effects

DRAFT 10

Savings Goals and Achievements



DRAFT 11

Energy Efficiency Costs

- Energy efficiency funding based on 75% of the total programmatic savings goals
 - 25% assumed self-funded savings

6th Plan Savings Summary (aMW) - 2015-2017 - Annual Goals

| Savings by Source | 2015 | 2016 | 2017 | Total Savings |
|---------------------------------|----------------|----------------|----------------|-----------------|
| BPA Funded Programmatic Savings | 49 | 46 | 47 | 143 |
| Utility Self Funded Savings* | 16 | 15 | 16 | 48 |
| BPA EE cost (\$M/aMW) | \$1.92 | \$1.97 | \$1.96 | \$1.95 |
| Total Cost (\$M/aMW) | \$94.61 | \$90.47 | \$92.55 | \$277.63 |

*assumes 25% self funding

DRAFT 12

Energy Efficiency Budget

- EE budgets for 2015 were established in 2012 for the 2014/2015 rate case
- CIR/IPR process for 2016/2017 budgets recently completed

| | 2015 | 2016 | 2017 | Total |
|-------------------------|---------|---------|---------|-----------------|
| EE Capital Budget (\$M) | \$92.00 | \$94.70 | \$97.70 | \$284.40 |

DRAFT 13

Mitigating Uncertainties and Risk

- Current projections leave potential for falling short of annual goals
- BPA believes this risk is minimal:
 - History of achieving EE targets
 - New utility reporting allows increased transparency into savings achievements
 - Middle range of non-programmatic savings achieves savings goals
 - Diversifying the EE portfolio across many savings types and markets
- Potential to pursue additional funds if needed
 - 3rd party financing
 - 2018/2019 Rate Case

DRAFT 14

Next Steps

- Continue to research non-programmatic savings and refine estimates
- Participate in development of 7th plan supply curves and EE targets
- Reassess budget needs when draft supply curves and targets available

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Questions?

DRAFT 16