

BPA Overview for the GHG Reporting Advisory Committee



October 2009



Federal Columbia River Power System

Columbia River Basin & BPA Service Area

WHAT IS BPA?

- Self-funding federal agency within USDOE. Sets rates to recover costs.
- Markets power at cost from 31 federal dams and 1 nuclear plant – over one-third of electricity used in PNW; 8,500 aMW.
- Markets transmission services – owns 75% (15,000 miles) of the high-voltage lines in PNW
- 300,000-square mile service area – includes WA, OR, ID and Western MT
- \$3.5 billion in annual revenues
- 3,000 employees
- Headquarters in Portland, OR
- Established in 1937



BPA Customers

- **Publicly Owned Utilities** - BPA's principal customer base consists of Northwest public utility districts (PUDs), municipalities and electric cooperatives. These entities are referred to as "preference customers" because they are entitled to a statutory preference and priority in the purchase of available federal power. Preference customers are eligible to purchase power at BPA's priority-firm (PF) rate for most of their loads.
- **Investor-owned Utilities (IOUs)** - consists of six regional IOUs. BPA makes financial payments to Oregon IOU residential and small farm customers under the Residential Exchange Program. BPA recently revised the program based on a ruling by the Ninth Circuit Court of Appeals, but it remains controversial.
- **Direct Service Industries (DSIs)** - consists primarily of two aluminum smelters. Under the Northwest Power Act, BPA signed long-term contracts with the DSIs in 1981, which expired in 2001. Since 2001, BPA has had varying contractual relationships with the DSIs.
- **Customers Outside the Northwest** - consists of publicly owned and investor-owned utilities in the Southwest and California. BPA sells and exchanges power via the Southern Intertie to these customers. Revenues generated by these "secondary sales" help to keep rates lower in the Pacific Northwest.



Highlights of BPA's Climate Change Roadmap

- Conduct agency-wide inventory of BPA's GHG footprint
- Implement strategies to further facilitate wind integration
- Include GHG avoidance benefit in analysis for proposed capital expense planning
- Evaluate system impact of climate change regional streamflow scenarios
- Develop strategies to achieve accelerated energy efficiency targets expected in 6th Power Plan
- Revise BPA's technology roadmaps to emphasize climate change related projects
- Examination of internal operations to identify efficiency and renewable opportunities



BPA Non-Slice System Mix 2000-2008

Resource Type	% of BPA Generation								
	2000	2001	2002	2003	2004	2005	2006	2007	2008
Biomass	0.2%	0.3%	0.3%	0.2%	0.3%	0.2%	0.2%	0.2%	.2%
Large Hydro	85.5%	76.3%	80.4%	79.3%	77.2%	77.1%	82.2%	83.0%	78.1%
Small Hydro	0.8%	0.9%	0.8%	0.6%	0.8%	0.7%	0.9%	0.8%	1.2%
Nuclear	10.1%	13.0%	10.5%	9.8%	11.4%	10.6%	10.8%	10.4%	11.6%
Natural Gas	0.0%	0.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Wind	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Solar	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Non-Specified Purchases*	3.4%	8.9%	8.0%	10.1%	10.3%	11.4%	6.0%	5.5%	8.9%

In 2008, BPA's GHG emission rate was 79.3 pounds/MWh.

* These are market purchases made to cover short term energy deficits.



BPA GHG Reporting

BPA currently reports its GHG emissions in a number of formats and to a number of entities:

- Various voluntary reports in California and Washington, including generation system mix reports (CA and WA) and GHG emission rate reporting to CARB in CA.
- "Founding Reporter" to The Climate Registry.
- Sulfurhexafluoride (SF-6) – As member of EPA's "SF-6 Emission Reduction Partnership for Electric Power Systems," BPA has been formally tracking and reporting on its SF-6 leakage since 2000. BPA's SF-6 leakage rate for 2008 was .46 percent.
- Federal reporting coming soon.



BPA and Senate Bill 38

BPA worked with its customer utilities on Senate Bill 38 for few different reasons:

- BPA's customer utilities have little to no control over the resource decisions BPA makes and they do not have access to the system profile;
- It is more efficient and cost-effective for the state, BPA and its customer utilities to have BPA submit a single resource mix report to the state;
- BPA is already submitting similar reports in Washington and California and will be reporting to The Climate Registry.
- We have a good story to tell.



BPA and GHG Reporting Rule

- BPA is voluntarily involved in this effort to support its customer utilities and assist the state;
- BPA plans to provide the same system mix report in Oregon that it uses in Washington and California, so it will be consistent across the states;
- In designing the rule, it is worth considering relationship with future federal reporting requirements that likely would cover BPA/USDOE;
- BPA will be hiring an independent verifier to validate GHG emissions reports to CARB and The Climate Registry; and
- There are some lingering issues around GHG emissions that we are working on and could affect future reporting.



GHG Reporting Issues Going Forward

- **Tiered Rates**
BPA is currently reviewing how to account for tiered rates.
- **EPA reporting requirements and President's recent Executive Order**
Federal agencies required to measure GHG emissions and have 90 days to set GHG reduction goals under new EO.
- **Emissions Associated with Reservoirs**
BPA is monitoring ongoing dialogue related to measuring reservoir emissions, but believes that FCRPS reservoirs do not emit much in the way of GHGs. Research conducted in Canada and the U.S. seems to support this hypothesis.
- **Transmission Line Losses**
There is debate in the reporting community about whether line losses should be the Scope 2 reporting responsibility of the transmission owner or the power consumer. It looks like the responsibility will end up falling on the transmission owners (e.g., BPA).
- **Wind Integration**
BPA's efforts to back up wind power could lead the agency to purchase some natural gas, which would affect the agency's system mix.

